

OVERSIGHT AND REAUTHORIZATION OF RAIL SAFETY PROGRAMS AND S. 2132, THE FEDERAL RAILROAD SAFETY AUTHORIZATION ACT

Y 4. C 73/7: S. HRG. 103-841

Oversight and Reauthorization of Ra...

HEARING

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION
OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE

ONE HUNDRED THIRD CONGRESS

SECOND SESSION

JUNE 14, 1994

Printed for the use of the Committee on Commerce, Science, and Transportation



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OVERSIGHT AND REAUTHORIZATION OF RAIL SAFETY PROGRAMS AND S. 2132, THE FEDERAL RAILROAD SAFETY AUTHORIZATION ACT

TUESDAY, JUNE 14, 1994

U.S. SENATE,
SUBCOMMITTEE ON SURFACE TRANSPORTATION OF THE
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The subcommittee met, pursuant to notice, at 3 p.m. in room SR-253, Russell Senate Office Building, Hon. J. James Exon (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: William Clyburn, Jr., staff counsel, and Clyde J. Hart, Jr., senior staff counsel; and Gerri Lynn Hall, minority professional staff member.

OPENING STATEMENT OF SENATOR EXON

Senator EXON. The committee please will come to order. In order to save some time, I would hope that I could enter my opening statement and any other opening statements in the record before recessing subject to the call of the Chair. A vote has just begun.

I am pleased to welcome a distinguished group of witnesses before the Surface Transportation Subcommittee to consider the reauthorization of the Nation's rail safety programs.

Today's hearing could not come at a more appropriate time. It comes at a time when the names of Thedford, NE; Smithfield, NC; Mobile, AL; and Kalamazoo, MI; bring to mind the tragedy of railroad disasters. It comes at a time when significant progress on rail safety is overshadowed by recent headlines. It comes at a time when a vibrant, growing economy puts more trains, trucks, and vessels on the Nation's railways, highway, and waterways.

The record of this committee on rail safety has been consistent and aggressive. Let us not overlook that we are reaping daily the benefits of that record, but also let us not forget that our work is not done.

Over the years, this subcommittee has had an excellent working relationship with the Federal Railroad Administration, FRA. While that relationship was marked by mutual respect, on a number of occasions this committee found it necessary to nudge and in some cases push FRA into action.

We pressed for progress on rear train-braking devices, track safety, grade-crossing improvements, locomotive ditch lights, and locomotive crashworthiness standards, to name just a few of our initia-

tives. This committee has been so aggressive that FRA now reports a backlog of rulemakings. I do not know whether that is good or bad, but at least it indicates something is being done.

This subcommittee also has been an early advocate for positive train separation, also known as advanced train control systems, or ATCS, an issue which I suspect will come up more than once in our hearing today. This system uses ground- and satellite-based technologies to monitor train locations. Once fully developed and implemented, ATCS holds a promise of eliminating a number of train-impacting rail accidents. In this regard, FRA, Union Pacific, and Burlington Northern railroads ought to be congratulated on the recently announced joint pilot project to test and develop ATCS technology.

President Clinton's nomination of Jolene Molitoris put an individual at the helm of FRA who, to date, has needed very little, if any, nudging. She nudges back when you do. She has brought new life to FRA, and is dedicated to safety and aggressiveness in bringing home to all of us the changes that sometimes are not readily accepted by a stubborn industry.

With the help of Don Itzkoff, a former counsel to this subcommittee, FRA has done landmark work in the area of ATCS, negotiated rulemakings, and fostered a new level of cooperation between labor, management, and Government.

As we review recent rail accidents, our thoughts and prayers are with the victims and their families, and our admiration and appreciation are with the rail workers and community members who came to their rescue.

Our efforts today are directed toward both preventing tragedy as well as responding to it. Many do not realize that most of the deaths on America's railroads are a result of events over which railroads have little or no control—that is, motor vehicle drivers and trespassers.

I welcome and applaud Secretary Peña's grade-crossing initiative announced only yesterday. It is a very significant and needed effort. I also congratulate Senator Danforth, recipient of this year's Operation Lifesaver legislative award, for his grade-crossing safety bill.

As I have indicated in several forums, this year's rail safety bill gives the committee an excellent opportunity to take up meaningful measures to improve safety where the rails meet the roads. I will work with my colleagues to develop a bipartisan grade-crossing safety amendment to this bill. I thank the witnesses for their testimony, and without objection, the full text of all of the submitted statements will be included in the record as if delivered, and without objection, that is so ordered. Mr. Chairman, your comments, please.

OPENING STATEMENT OF SENATOR HOLLINGS

The CHAIRMAN. The Surface Transportation Subcommittee will hear testimony this afternoon regarding the oversight and reauthorization of the Nation's railroad safety programs. At this hearing, the subcommittee will review the substantive provisions of S. 2132, the Federal Railroad Safety Authorization Act of 1994, as introduced by Senator Exon at the request of the administration. In

this regard, the subcommittee will discuss efforts to enhance rail passenger and freight safety through innovations and administrative rulemakings. In addition, the subcommittee will address possible measures to increase safe working conditions in the rail industry.

The review of rail safety programs is particularly timely. Although there have been significant safety improvements in the rail industry, the Nation has endured several rail accidents in recent years that have resulted in tragedy and fatalities. The collision of commuter trains in Indiana and derailments in South Carolina, North Carolina, and Alabama lend urgency to this committee's considerations. As chairman of the Commerce Committee, I always have emphasized the importance of safe and efficient transportation and recognize that comprehensive and effective rail safety programs are integral to saving lives and promoting the economic health of rail transportation of passengers and freight.

I am pleased to have with us this afternoon the Honorable Jolene Molitoris, Administrator of the Federal Railroad Administration. Ms. Molitoris will explain the rail industry's safety record and what safety rules and initiatives are being planned and implemented to improve that safety record. We also will hear testimony from Carl Vogt, Chairman of the National Transportation Safety Board, who will provide the committee with a summary of that agency's investigations into recent rail accidents and what technological advances may be available soon to prevent such accidents. In this connection, I will be interested particularly in Chairman Vogt's discussion of advanced train control systems which can provide positive train separation in emergency situations. Additionally, we will have a panel consisting of Edwin Harper of the American Association of Railroads and Ronald McLaughlin of the Railway Labor Executives' Association, who will provide us with management's and labor's perspectives on safety issues. All of the witnesses today bring with them knowledge and experience about the rail industry and about safety efforts. I look forward to the testimony.

Thank you, Mr. Chairman.

Senator EXON. Thank you, Mr. Chairman. We will be asking the witnesses to summarize their statements in a few moments. I now wish to recognize Senator Hutchison for any comments or opening statement which she may have.

OPENING STATEMENT OF SENATOR HUTCHISON

Senator HUTCHISON. Yes, thank you, Mr. Chairman. I am very pleased to be able to visit with you today, because as the vice chairman of the National Transportation Safety Board, rail safety was a very important part of the time that I was on the board, and I would like to just say that we have come a long way.

We cannot stop, of course, but there were 10 million fewer vehicle traffic accidents last year than in 1978, with 10,000 fewer deaths. Transportation mishaps involving the release of hazardous materials was cut 80 percent between 1978 and the present from 138 to 27 incidents. Accidents involving railroads fell from 11,300 to 2,300 between 1978 and 1993. The number of collisions on grade crossings also dropped dramatically from 13,400 in 1978 to 4,800 in 1993.

While the number of people injured at grade crossing accidents has reached a new low, unfortunately the fatalities at grade crossings has increased, so clearly we have to continue our vigilance.

I would just say that I think we have two approaches. When I was at the National Transportation Safety Board, we started with the National Safety Council a joint effort called Operation Life-saver that did really begin an awareness project, and we had a great response. The number of fatalities at grade crossings did indeed come down. I would like to talk a little more about that when we get to the question time, because I think that was a very valuable part of grade crossing safety.

When you go into the schools and you talk to children in terms that they can understand, with pictures about how you do not try to beat a train, that sells, and it did make a difference for us. I would like to talk about the sort of awareness, which is an easy thing to do.

Then, second, of course, the technology which is the future, and I would like to talk about the IVHS systems that I think are really going to make a vast improvement in our situation.

I think we have the very first step solutions, that are sort of the see-and-be-seen simple concepts, and then I think we have the high technology that we will be able to apply to this. We ought to be able to beat grade crossing deaths. There is no reason on earth why someone should be hit by a train.

I hope that we can talk about that with our positive solutions, both the old and the new, and thank you very much.

Senator EXON. Thank you, Senator Hutchison. Senator Danforth.

OPENING STATEMENT OF SENATOR DANFORTH

Senator DANFORTH. Mr. Chairman, thank you very much. I wish I could be here for this hearing. Unfortunately, I am supposed to meet 80 constituents on the steps of the Senate right after this vote. You are welcome to meet them in my stead, Mr. Chairman, if you would like. [Laughter.]

Senator EXON. I think you can handle that all right, Senator Danforth.

Senator DANFORTH. I do want to thank you, Mr. Chairman, for holding the hearing, and thank the witnesses for being here.

If I were here, I would ask a question, and so I would ask it now, hoping that somehow the witnesses could fit it into their answers when their time comes. The issue relates to S. 2127.

This is a bill that was introduced in May, Senator Exon has referred to it, and it does provide for education, for engineering and for enforcement. It is supported by the railroads and by rail labor, and I think it is consistent with the administration's program. My question is, and I hope it will be addressed by the panel, Could the administration support the enactment of the legislation?

Thank you, Mr. Chairman.

Senator EXON. We now have to go vote. Could you possibly give a brief response to the Senator's question?

STATEMENT OF HON. JOLENE M. MOLITORIS, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION, DEPARTMENT OF TRANSPORTATION; ACCOMPANIED BY DONALD M. ITZKOFF, DEPUTY ADMINISTRATOR, S. MARK LINDSEY, CHIEF COUNSEL, AND GRADY C. COTHEN, JR., ACTING DEPUTY ASSOCIATE ADMINISTRATOR FOR SAFETY STANDARDS AND PROGRAM DEVELOPMENT

Ms. MOLITORIS. Certainly, Mr. Chairman. As you know, and you have already mentioned, Secretary Peña stood on the triangle yesterday and introduced our grade crossing action safety plan for 1994, and I think that one of the things you will see when you look at it is the common ground that we have with Senator Danforth and his bill.

The fact is, we are looking very much at the education element and the awareness element. We are also looking at the technology element, and we think that there are a real common interest and a common vision about how we address deaths and tragic accidents at grade crossings.

We think that the elements that you have already introduced, Mr. Senator, would certainly be something that we support, and we look forward to working together with this committee in pursuit of our initiative, which has both elements of policy and administration within our resources and legislation, and also to work with you on your initiative.

Senator EXON. Thank you, Madam Administrator. If you have further questions in this regard, we will be glad to ask them in your behalf, Senator.

We stand in recess subject to the call of the Chair, and we will go right back to you when we return. Thank you very much.

[A brief recess was taken.]

Senator EXON. The committee please will come to order.

Administrator Molitoris, I apologize for the necessary interruption. I am pleased to recognize you at this time. Your statement has been accepted in full, and if you would summarize it now, we would appreciate it.

Ms. MOLITORIS. Thank you, Mr. Chairman.

I am privileged to be here to represent President Clinton and Secretary Peña as I report on the Federal Railroad Administration's commitment to railroad safety, and you, Mr. Chairman, have really been a model for us all, investing long years of tireless support in safety. We want to personally and as an agency thank you for your leadership, for sponsoring our bill before us today, the Federal Railroad Safety Authorization Act of 1994, and for your words of encouragement and support.

I want to assure you, Mr. Chairman, that your focus on safety is shared by President Clinton, Secretary Peña, and all of us at the FRA. Railroads are one of the safest modes of transportation, but safe railroad operations do not make the evening news. Unfortunately, public perception is often shaped by media attention on our major accidents. Tragically, last year 59 people died in serious accidents at Gary, IN, Longview, WA, and Saraland, AL.

At the FRA, we take all of these tragedies and all other accidents very seriously. Our safety mission calls on us to respond to these

unfortunate emergencies, but most importantly our safety mission is about prevention, about stopping and preventing these tragedies.

In order to achieve our goal, the FRA is doing business in a new way. It is about reinventing Government, being more responsive, timely, and doing our job better for less money and in less time.

I would like to talk to you about how our authorization bill supports our new approach, and also to review the industry's safety projects and progress in 1993. It truly is not business as usual at the FRA, Mr. Chairman. FRA is reinventing its safety program to respond quickly and to work in partnership with every segment of the rail industry as well as dozens of other constituent groups. We are reexamining all aspects of how we work, and searching for ways to improve safety while saving time and money.

The grade crossing initiative that you referenced earlier is an example of the partnership within the Department. Last year, approximately 1,200 people died in grade crossing and trespass accidents. Secretary Peña is committed to stopping these unnecessary deaths, and consequently he directed the FRA, the FHWA, the FTA, and NHTSA—the National Highway Traffic Safety Administration—to work together to prepare a comprehensive program to attack this program.

Yesterday, that bill and the action plan were introduced to the public and the media. The plan from the Department is made up of 55 different initiatives designed to accomplish 6 overarching goals: to increase enforcement, rail corridor reviews and improvements, public education, safety at private crossings, data and research, and trespass prevention.

We have proposed legislation to change our existing Grade Crossing Safety Program. Administered by FHWA, the legislation would allow States to grant incentives for closing crossings, making them 100-percent eligible for Federal funds, instead of needing the matching money that is required now. It proposes incentives for rail corridor review and improvements, and it increases funding for Operation Lifesaver. I think a number of those initiatives very much respond to your concerns, and also to Senator Hutchison's.

We stand ready to work with you, Senator Danforth and other members of the committee, to advance our grade crossing plan, our legislation, and other initiatives in Senator Danforth's bill.

Two other examples of response to emergencies are worthy of note. First, the FRA is conducting a 60-day review of securement of freight on railcars. Secretary Peña directed this action following last month's Amtrak accident in Smithfield, NC.

Second, we are continuing our work related to Saraland, AL. In cooperation with the Coast Guard, we are improving signage on waterway bridges. We are researching the new technology that is out there to help us determine bridge damage. We are launching a pilot project in that area. We are improving markings on channels and enhancing the ability of people to notify the responsible parties about accidents.

We are working closely with our partners on these emergencies, but we are also working with them every day. We want everyone who works with us to know we have an open door. We want everyone who is our partner—labor, management, suppliers, and customers, as well as the general public—to know that they have a

friend at the FRA, and that they will get a response, and they can be part of the process if they want to be.

For example, just 10 days ago, we met with over 40 representatives of management and labor to discuss trackside worker safety issues and the first negotiated rulemaking in the history of FRA. We have lost 31 trackside workers in the last 6 years. These deaths are preventable.

That meeting resulted in a commitment by the railroads to have a safety blitz on their properties regarding trackside worker safety. It also will involve the reorganization of rules that our employees need to guide their actions. It will also begin the process of a negotiated rulemaking which will save us, we believe, time and money, because it brings all the parties together at the beginning so that they have ownership of the final rule that is published.

In addition, we have been continuing our Administrator's roundtable so that I can see people eye-to-eye and hear what their real concerns and problems are in the industry. All of these working relationships help us reengineer FRA. Our most important and valuable resources are our own people, and we are providing for them an environment in which they can be proactive, get their opinions and creative ideas into the answers that we need for rail safety.

Our Federal Railroad Safety Authorization Act of 1994 is presented to you in this spirit. This bill will help us meet our safety mission in three ways. It recognizes our partnership approach to safety, gives us tools to be more effective, and allows us to fulfill our responsibility and outstanding regulatory requirements which you have mentioned.

Today, we are working on more than 40 outstanding rulemakings and congressional reports, including both discretionary and statutory projects. We recognize and understand the importance of completing this work, and therefore we do not intend to seek extensive new enforcement authority today.

However, we are requesting some important provisions. For example, a 4-year authorization rather than the 2- or 3-year program that is more traditional. Second, a biennial reporting requirement. These will both save time and money, and they will not compromise our safety mission.

The third provision asks for an hours-of-service pilot project. We are very encouraged by the work that the B of LE and AAR are doing on the issues of fatigue and work-rest cycles, and we want to be ready to respond to the conclusion of their work, and this provision allows us to grant waivers on jointly agreed-upon labor-management proposals.

Fourth is to correct a legislative anomaly which does not allow us at this time to disqualify for statutory violations. This bill, combined with our new approach in the safety program, will help us build upon the rail industry's outstanding safety record. It is unfortunate that there were any fatal accidents last year, because there are no words to comfort those families who have lost members, but I hope that they will have some comfort in knowing that our goal is no deaths and no injuries, and we have continued to move and make progress in 1993 in that regard.

In terms of our train accidents, 1993 was the second safest year on record, second only to 1992, which did set the record. In 1978

there were almost 11,000 train accidents. In 1992 and 1993 we are down to about 2,400 and 2,600, respectively. The accident rate for 1993 was 4.25 per million train miles; 3.98 was the all-time low in 1992. We also saw a great improvement in the category of on-duty injuries and illnesses of employees, which decreased 14 percent in 1993 from 1992.

The reduction is particularly striking when you look at serious injuries to employees on duty. In 1979, there were about 6,600 of these. Last year, there was 1,347. Considering how large our industry is, this record really is remarkable. However, we will never be satisfied, Mr. Chairman, until we reach zero deaths and zero injuries.

We look forward to working with you and responding to your questions on our bill, and we again thank you for your always welcoming attitude.

[The prepared statement of Ms. Molitoris follows:]

PREPARED STATEMENT OF JOLENE M. MOLITORIS

Good afternoon, Mr. Chairman and members of the Subcommittee. With me today representing the Federal Railroad Administration are Mr. Donald Itzkoff, the Deputy Administrator; Mr. Bruce Fine, the Acting Associate Administrator for Safety; and Mr. Mark Lindsey, the Chief Counsel.

I am very pleased to have the opportunity to testify before the Surface Transportation Subcommittee on the safety of our Nation's railroads and on the Federal railroad safety program, now entering its second century. Last fall, representatives of the Federal Railroad Administration, participating States, and the railroad industry gathered at Union Station to observe the centennial of that program, which began in 1893 when Congress passed the first Safety Appliance Act. It was during that era, in 1889, that President Benjamin Harrison addressed Congress urging passage of railroad safety legislation, saying,

It is a reproach to our civilization that any class of American workmen should, in the pursuit of a necessary and useful vocation, be subjected to a peril of life and limb as great as that of a soldier in time of war.

Reading those words today, I feel a great sense of appreciation for the people, in and out of government, who worked so hard over the decades to save so many lives and prevent so many injuries, and I am proud of their accomplishment. And yet, as you remember, instead of celebrating that centennial, we reflected somberly on our efforts, shaken by the knowledge of the terrible Amtrak accident at Saraland, Alabama, only the day before. These events—Saraland and the centennial—seemed a parable, a warning that, despite the many advances in the struggle to promote railroad safety, setbacks still confront us. Mr. Chairman, I went to Saraland with Secretary Peña right after the accident, and saw and felt our terrible loss there. I came away from that experience resolved that we must do more than ever to save lives and prevent injuries in this second century of the Federal railroad safety program.

In my testimony this afternoon, I will first review with you the railroad industry's recent safety record. In that context, I will next address the Administration's rail safety legislation and our efforts to enhance the agency's ongoing safety program, including our new "customer service" approach. I will detail our response to Saraland and other challenges, including issues presented by the recent Smithfield, North Carolina, incident. I will discuss our implementation of recent statutes and the work remaining under those acts and, in closing, comment on the General Accounting Office's report on Amtrak passenger car safety and on safety issues related to the next generation of high-speed-rail trains.

THE RAILROAD INDUSTRY'S SAFETY RECORD

In many respects the railroad industry experienced a mixed safety record in 1993. Overall America's railroads continue to move passengers, hazardous materials, and other freight with a high degree of safety. Although we will never be satisfied as long as accidents and injuries continue to occur, the railroad mode is, by most measures, a very safe one today; and we are working hard to make further progress, especially because we recognize the increased risk of severe accidents that could result from denser operations, increased loads, and higher speeds. To improve safety, we

must continue to reduce risk across a system of almost 300,000 track miles upon which America must increasingly rely to carry freight and passengers, as part of a balanced national transportation system. The Nation's railroads employ over 200,000 persons, operate over 1.2 million cars using 20,000 locomotives, and log over 600 million train miles each year.

As you know, in 1993 we experienced two serious passenger train accidents, at Gary, Indiana, where seven people lost their lives, and at Saraland, Alabama, where 47 were killed. Both of these accidents illustrate the catastrophic consequences of human error. In Saraland, of course, that error appears to be one not attributable to a railroad or its employees. In addition, a severe freight train collision at Longview, Washington, claimed 5 crewmembers. Much attention has focused on these tragedies, and I will detail our responsive efforts later in my testimony.

In order to provide you with a broader report on the industry's overall safety performance, I must preface my comments with two cautions. First, our safety statistics for the full year of 1993 are preliminary. That is, these data are subject to slight revisions due to late and corrected reports. Historically, such revisions have not exceeded one or two percent of the totals for most data elements, so the numbers are substantially complete. Second, the data compiled here originate with the railroads. FRA does not have the resources to verify each and every report of accident cause; however, based on our involvement in selected accident investigations and spot review of underlying records, we believe that these data, in the aggregate, fairly reflect the true pattern of accident causation.

Train accidents continue to occur in the railroad System, but with low frequency, given the scale of railroad operations. A "train accident" involves the movement of on-track equipment that results in damage to railroad equipment or property equal to an amount above the current reporting threshold, as revised periodically for inflation. (FRA is in the process of changing that threshold in a rulemaking that will employ a statutorily mandated methodology for determining the proper dollar amount.) FRA believes that the rate of train accidents is a very useful barometer of the state of railroad safety. Certain highway-rail collisions qualify under the technical definition of "train accident." However, to avoid double counting and because they stem from different causes, we have excluded those occurrences from the "train accident" numbers that will follow.

As measured by the train accident rate, 1993 was the second safest year for the railroads, surpassed in this respect only by 1992. The 1993 train accident rate was 4.25 per million train miles, as compared with the all-time low of 3.98 in 1992. In 1993, there were 2,608 train accidents, as compared with 2,359 in 1992. These data reflect the continuing significant improvement in railroad safety since 1978, when 10,991 train accidents occurred and the train accident rate reached 14.62 accidents per million train miles, almost three and one-half times what it is now. See attached chart, "Train Accidents."

After dramatic improvements in the period 1979-1986, the train accident rate has held relatively constant. Although the frequency of train accidents remains very low, the situation has not been static. Signal accidents increased in 1993 over normal levels due to a high number of accidents in an automated hump yard. Track accidents and other accidents are up 19 percent over last year. Some of this increase in track caused accidents may reflect the heavy rains that occurred in the Midwest during the spring and summer months, but a steep rise in the cost of replacement crossties—not offset by any adjustment for inflation—is another possible factor. Of the 2,608 reportable train accidents in 1993—

- 37 percent were caused by track;
- 33 percent were caused by human factors;
- 14 percent were caused by equipment;
- 2 percent were caused by signals; and
- 4 percent were caused by miscellaneous factors such as objects on the track, vandalism, and rack equipment interaction.

See attached chart, "Train Accidents by Cause." Although human factor accidents as a whole may be less severe with respect to monetary loss because many occur at low speed, some of our most serious accidents over the past few years have been caused by human factors.

Certain trends, unfortunately, are quite evident. Every year, half or nearly half of all deaths associated with railroading occur at highway-rail grade crossings, and 1993 was no exception: 625 of the 1,278 fatalities (49 percent) occurred in these accidents and incidents. Trespasser fatalities declined slightly, but also remained relatively high at 523, or 41 percent of all fatalities. Grade crossing and trespasser fatalities still account for about 90 percent of all fatalities. See attached chart, "1993 Total Fatalities."

It is encouraging to note, however, with regard to grade crossing statistics that although fatalities at grade crossings increased between 1992 and 1993, the absolute number of grade crossing accidents and incidents reached an all-time low in 1993, or 4,888. There were 13,316 such events in 1978. See attached chart, "Highway-Rail Crossing Accidents."

The transportation of hazardous materials by rail has continued to be remarkably safe. The number of train accidents resulting in a release of hazardous materials declined from 55 in 1989 to 28 in 1993, an improvement of 49 percent in four years. There were 136 such accidents in 1978. See attached chart, "Train Accidents Involving Hazmat." Since 1980, there has been only one fatality caused by the release of hazardous materials during rail transportation, and that fatality occurred in 1986.

Railroad employee safety also showed some signs of improvement in 1993 in that the rate of on-duty casualties reached an all-time low of 5.9 per 200,000 person-hours; however, employee on-duty fatalities rose to 47 (including 3 at grade crossings), as compared with 34 (including 2 at grade crossings) in 1992. This figure for 1993 represents about 4 percent of all 1,278 fatalities. See attached chart, "Employee on Duty Casualties."

Compared to 1992 data on injuries and illnesses of employees on duty, on-duty employee injuries and illnesses for 1993 declined 14 percent to 15,384. We have also evaluated these statistics based upon a distinction between serious and non-serious injuries, with serious injuries being defined as those involving dislocation, fracture, amputation, hernia, concussion, internal injury, or loss of eye. In 1993, there were only 17 serious non-fatal injuries in train accidents (events meeting the dollar threshold for damage) and 164 in train incidents (other events involving moving, on-track equipment), or 0.1 percent and 1.1 percent, respectively of all on-duty employee injuries and illnesses. See attached chart, "Serious Injuries to Employees on Duty." By contrast, there were 1,157 serious non-fatal injuries in non-train incidents, or 7.5 percent.

It should be underscored that 26 percent of employee deaths, 87 percent of employee injuries and illnesses, and 86 percent of serious employee injuries in 1993 were in "nontrain" incidents, which, as their name implies, have nothing to do with the movement of trains. A great many of them are slips and falls, sprains, back injuries, eye injuries, and the like that, unfortunately, continue to occur in hazardous industrial settings, including railroads and other industries.

We believe FRA's safety program has played an important role in this generally good safety picture. Of course, improving railroad finances over the last decade, industry safety initiatives, and the daily efforts of railroad employees and management have had a significant effect on the situation. We are striving constantly to improve on this record, and we must continue to find ways to reduce the frequency of train accidents, hazardous materials releases, deaths, and injuries. Toward that end, we have submitted rail safety reauthorization legislation to the Congress, and we are in the process of reinventing our safety program.

THE ADMINISTRATION'S PROPOSED LEGISLATION

Previous rail safety legislation, including the Rail Safety Improvement Act of 1988 and the Rail Safety Enforcement and Review Act (1992), mandated that FRA undertake significant rulemaking and reporting responsibilities. In addition, FRA has identified a number of other priority areas for regulatory action on its own initiative, for a total of more than 40 safety regulatory projects and reports to Congress. Recognizing the need to complete this significant agenda, we have proposed a statutory reauthorization that does not seek extensive new enforcement powers or duties.

This four-year authorizing legislation, entitled the "Federal Railroad Safety Authorization Act of 1994," includes a number of elements, however, that would significantly advance safety on our Nation's railroads.

One provision would authorize FRA, as the delegate of the Secretary of Transportation, to approve pilot projects under the Hours of Service Act, permitting the selective implementation of innovative joint proposals from rail labor and management that vary from existing statutory requirements. The Hours of Service Act sets maximums on working hours and minimums on off-duty hours and does not permit FRA to regulate the working hours of railroad employees based on a factual record indicating what is best for safety. Consequently, we have a gap in our regulatory authority—we cannot regulate on the subject of employee fatigue. In pilot projects approved under this proposed authority, the Act's normal restrictions on maximum hours of service and minimum rest periods could be adjusted to address safety needs. While we recognize the reluctance of some in the railroad community to embrace change in this vital area, we believe that this proposal will provide the flexi-

bility needed for progress in addressing vital concerns about operating crew fatigue and alertness in a variety of situations spanning the railroad industry.

A technical amendment in the bill would permit FRA to base a determination that an individual is unfit for safety-sensitive service upon the individual's violation of the Federal Railroad Safety Act of 1970 or one of the older railroad safety statutes, such as the Locomotive Inspection Act. Currently, FRA is authorized to disqualify an individual only for violation of a "rule, regulation, order, or standard," not for violation of a statute. In other words, while violation of a mere regulation is grounds for disqualification, violation of a direct Congressional mandate is not. This anomalous limitation is generally not a practical problem because specific FRA regulations mirror nearly all of the substantive statutory provisions. It is mainly a problem with regard to violations of the Hours of Service Act, under which FRA has virtually no rulemaking authority.

The final amendment would change FRA's annual reporting requirement to a biennial reporting calendar. This change would make FRA's reporting load more manageable.

Passage of the Federal Railroad Safety Authorization Act of 1994 will enable FRA to fulfill its safety mission by focusing its limited resources in large part on existing regulatory mandates. This approach is consistent with the Department's efforts to make government work better and more responsively. We look to work in partnership with the members of this Committee, as we "reinvent" our entire approach to our safety and enforcement responsibilities.

REINVENTING FRA'S SAFETY PROGRAM

Including new positions to be filled this fiscal year, we employ in FRA's Office of Safety a headquarters staff of 87 and a field staff of 458, including support personnel. In addition, 135 State inspectors assist the Federal effort through the 31 State participation programs. Our Office of Chief Counsel, including the 29 members of the Safety Law Division, provides legal support for FRA's safety program. Our Office of Research and Development also contributes greatly to the safety program and is engaged in numerous studies and projects concerning the safety aspects of track, equipment, human factors, and emerging technologies.

In 1993 FRA conducted a total of 53,129 inspections in the various disciplines: 10,283 for track; 5,889, signal; 13,473, motive power and equipment; 12,979, operating practices; and 10,505, hazardous materials. In that year FRA also investigated 150 accidents and 1,700 complaints and gave 501 Operation Lifesaver presentations to a total of over 100,000 people.

Customer Service

Soon after being confirmed as Administrator, I undertook a thorough review of our entire safety operation. Our field operation constitutes the bulk of our human resources—nearly two-thirds of the 739 employees we are authorized in fiscal year (FY) 1994 are field employees in our eight regions. Supported by a clerical and administrative staff of 57, the 401 men and women of the field staff are the inspectors and professionals who visit the railroads and make our enforcement system work, every day.

I looked at how we conducted business in Washington and elsewhere and concluded that, as an agency, we needed to change from an agency viewed as reactive to a proactive customer service center. Bruce Fine, our Acting Associate Administrator for Safety, is committed to a collaborative approach to achieving improved levels of safety in the railroad industry. FRA must not work in a vacuum, but rather develop a new spirit of openness and cooperation with all our customers: with rail labor, rail management, suppliers, State and local governments, and users of transportation services everywhere. By sharing information and discussing options and alternatives, we can marshal the creative genius of all elements of the rail industry and increase rail transportation safety.

The main focus of our efforts will be to build on our past record of accomplishment by re-engineering our management tools and improving customer service. President Clinton, in Executive Order 12862, entitled "Setting Customer Service Standards," has directed agencies to provide

the highest quality service possible to the American people. Public officials must embark upon a revolution within the Federal Government to change the way it does business. This will require continual reform of the executive branch's management practices and operations to provide service to the public that matches or exceeds the best service available in the private sector.

In accomplishing this directive, we have already started a dialogue with our customers. In 1993 I initiated Administrator's roundtable discussions with representa-

tives from rail labor, management, suppliers, and other customers to discuss a single subject in depth. Most of our roundtable topics are related to safety. To date, seven roundtables have been held, three more are scheduled, and more are contemplated. The participants have been enthusiastic about the opportunity to discuss directly with the Administrator the real rail issues they face and ideas for working with FRA more beneficially. We are not forgetting our "in-house" customers. Quarterly listening sessions for all FRA employees help everyone understand FRA's mission, policies, and program activities. It is an opportunity for a candid sharing of crucial information.

Full use of existing FRA management tools will help us formulate standards and measure results to improve customer service. The National Inspection Plan, the Quality Improvement Program, and the Regional Inspection Points Program will anchor FRA's re-engineering process. These programs focus on our agency's key asset—the time that FRA inspectors have available to conduct inspections. We have worked hard, using these tools, to ensure that our inspectors spend their available time at locations of greatest need and to conduct quality inspections, rather than producing inspection reports and paper.

The National Inspection Plan, or "NIP," model allocates annual available inspection time to a railroad, by state, based on the railroad's risk factor history. Regional managers use this and other current information (qualitative and quantitative) to formulate their inspection plan activity for the year.

The Quality Improvement Program, or "QIP," which was simplified in 1992 in response to field recommendations, comprehensively analyzes inspector activity, telling us, for example, that 38 percent of inspectors' time on average is used exclusively for inspections, as distinguished from accident investigation, complaint work, travel, and other duties, and that, on average, Federal inspectors spend at least 15 days a month working in the field. QIP helps us plan better by using information on the amount of time needed for all inspector activities.

Another resource-allocation tool, the Regional Inspection Points Program, or "RIP," contains an extensive inventory of railroad operations (track miles, signal systems, train movements, etc.) gathered by inspectors. Collection of RIP data has been planned so as not to unduly interfere with enforcement activity.

Using these management tools, our safety program managers are better able to focus inspectors' efforts on the safety matters deserving the greatest attention. Consequently, FRA has more accurate data about railroads' level of safety and can strategically apply sanctions where necessary to deter unsafe practices.

Enforcement

FRA has an active and effective enforcement program designed to deter non-compliance. In FY 1993, FRA collected \$15.6 million in civil penalties (its second highest total ever), including \$2.6 million under the Hazardous Materials Transportation Act. In the area of individual liability, three civil penalty cases were closed in FY 1993, and four have been closed so far in the present fiscal year. Four other civil penalty cases against individuals are pending. In FY 1993, we issued one disqualification order, and in FY 1994 we have issued one notice of proposed disqualification. In addition, our Office of Chief Counsel issued two warning letters to individuals, and our regional directors issued more than 40 regional-level warnings to individuals in FY 1993.

Due to limited resources and an extremely heavy workload, as recently as 1991 our civil penalty program was not as timely as it should have been. By the beginning of 1989, there was a large backlog of violation reports on which civil penalties had not been assessed and additionally the 1988 safety act had given the agency its largest regulatory workload in history. We have attacked the problem systematically and with excellent results. We have increased the number of staff attorneys in our Safety Law Division from seven to seventeen and added five more secretaries and one more supervisor. Attorney productivity has dramatically increased by re-engineering FRA's case generation system. With the resources sought in the FY 1992 budget request, we reached our goal of achieving an average transmittal time of 120 days or less. We have now exceeded this goal, and with the needed resources, we can continue to do so.

Response to Saraland Accident

FRA recognizes that intermodal intersections present safety risk for which coordinated responses may be needed. Last September near Mobile, Alabama, a tow of barges accidentally struck a railroad bridge located well off its intended course, leading to 47 fatalities among the passengers and crew of Amtrak's Sunset Limited. Clearly, the tow boat should not have moved up that bayou in dense fog, and the bridge was a low-risk location for such an accident to happen; however, as safety

professionals, we still look for ways to prevent a recurrence of this kind of tragic event. Just as the United States Coast Guard is working diligently to implement stronger safety measures for inland-waterway barge operations, FRA is exploring whether cost-effective answers can be found to the problem of detecting bridge damage before it causes a tragedy. FRA is also working with the Coast Guard to ensure that more timely notice is provided of bridge damage.

Response to Gary and Longview Accidents: FRA's Advanced Train Control System Efforts

FRA is placing the highest priority on promoting the early implementation of new technology to prevent collisions such as those that cost the lives of seven passengers at Gary, Indiana, and five crewmembers at Longview, Washington. The technology we choose should also be capable of preventing overspeed derailments and protecting workers performing roadway maintenance (where they are granted exclusive use of track or slow orders are imposed on adjacent track). We refer to this package of objectives as "positive train control."

We agree with the National Transportation Safety Board that the industry needs to make investment decisions and establish a firm timetable for testing and installation of some form of positive train control system. Toward that end, I have conducted a series of three roundtable discussions with a broad range of industry parties, including labor and suppliers. We have commissioned a technical review, by the Institute on Telecommunications Sciences, of the AAR Advanced Train Control Systems (ATCS) program. That project has reviewed the feasibility of the ATCS specifications and has identified the steps the industry and we would need to take to help make ATCS a reality. We have requested funding in the FY 1995 President's Budget for development of risk analysis model to determine priorities for application of positive train control where justified.

The industry has begun to respond. On April 29, the Union Pacific (UP) and Burlington Northern (BN) railroads took the first important step toward implementation of positive train control by announcing a major test program on major lines in Washington and Oregon. UP and BN will request bids for this project by October 1. FRA has promoted the concept of a test bed as a critical first step in achieving the safety benefits of positive train control. The UP/BN project fulfills this need.

On the same day the UP/BN venture was announced, the Association of American Railroads (AAR) Board of Directors voted their support. UP and BN will be working with the AAR to ensure compatibility (interoperability) between the UP/BN system and other systems built to ATCS specifications. I am very encouraged that the UP/BN project is well integrated into their overall business plan. In my judgment, this likely portends installation of the system on a substantial portion of those very large railroads.

FRA has also received additional information from the AAR regarding future planning for ATCS. We are currently reviewing this data and preparing our report to the Congress due July 3, 1994, under the Rail Safety Enforcement and Review Act.

Response to Smithfield Accident: Special Safety Review of Lading Securement

I would like to move on now to another FRA initiative, one related to preventing another kind of collision, namely raking collisions in which lading of a train consist on one track collides with parts or lading of a consist on an adjacent track or with a structure, such as a bridge.

In the wake of the recent Amtrak accident on May 16 at Smithfield, North Carolina, FRA has begun to conduct a special safety review of how lading is secured on rail cars. While the National Transportation Safety Board has yet to determine the probable cause of the accident, our preliminary investigation indicates that the Amtrak train struck a trailer that had shifted on a flatcar of a CSX freight train operating on an adjacent main track. As a result, the Amtrak assistant engineer was killed, and 122 passengers and crew were injured and received medical attention. The Amtrak engineer was injured critically.

The collision at Smithfield together with the doubling of trailer/container train traffic in the last decade and the growth in passenger rail service demanded a thorough, comprehensive review of the standards and procedures used to secure freight on rail cars. FRA recognizes the importance of immediately identifying and swiftly addressing any potential safety risks that may exist for rail passengers as well as Amtrak and freight railroad employees.

By way of background on the issue of lading securement, the railroad industry uses the AAR standards for securing freight not classified as a hazardous material. Of course, the Research and Special Programs Administration's Hazardous Materials Regulations, which are enforced by FRA in the rail mode, govern securement

of hazardous materials. Regarding securement of ordinary lading, FRA standards for inspection of freight cars by train crewmembers require that a crewmember (i) inspect a freight car wherever it is placed in a train and (ii) determine prior to departure of the train whether the car has any "object extending from side." Operating rules of the railroad also uniformly require train crews to inspect trains for unsafe conditions, including shifting loads. FRA regulations require that such operating rules be filed with FRA and that railroad employees be periodically instructed and tested on operating rules. FRA regulations further require railroads to train their employees and conduct inspections to ensure compliance with their operating rules.

FRA is making this review of lading securement one of its top priorities. We are working closely with Amtrak and the freight railroads to ensure a prompt analysis of all aspects of how freight is secured. According to our accident database, during the last five years there have been 18 accidents involving shifting containers or trailers, not including the Smithfield accident. While the number of reported incidents similar to the Smithfield accident is low, we want to prevent future problems. This is at the heart of FRA's safety mission. We will have our preliminary findings and a plan of action to the Secretary before the end of July.

Highway-Rail Crossing Emphasis

We believe that the new resources granted in the President's Budget for FY 1994, as enacted by Congress, will help us provide better focus from the rail side on reduction of risk at highway-rail crossings, complementing the efforts of the Federal Highway Administration, States, local governments, and thousands of Operation Lifesaver volunteers. All of us must be part of the solution to this intermodal transportation safety problem, and the tragic numbers clearly point to the need to continue aggressive engineering improvements (including consolidation of crossings), research, education, and law enforcement and a new emphasis on corridor-wide approaches to grade crossing issues.

Secretary Peña has directed FRA, the Federal Highway Administration (FHWA), the Federal Transit Administration, and the National Highway Traffic Safety Administration to develop a new comprehensive action plan for improvement of safety at crossings. This is the first time in history that these modes have worked so closely as a team to address these critical transportation safety problems. The action plan will build on the momentum we have already achieved.

We are already well positioned to begin a new initiative in this area. In response to the President's Budget for Fiscal Year 1994, the Congress has funded a small cadre of grade crossing safety and trespasser-prevention managers—the first FRA field resources fully dedicated to grade crossing and trespasser safety. These individuals will work with FHW to help State and local communities design and execute corridor safety improvement programs. We will also be working to bring to a swift conclusion the Congressionally-mandated rulemaking on maintenance of grade crossing warning systems, for which the notice of proposed rulemaking (NPRM) was issued on January 11, 1994. Further, FRA will move promptly to require auxiliary locomotive lighting that will make trains more conspicuous to motorists.

Human Factors Emphasis

As dictated by the continuing prominence of human factors in the train accident rate (33 percent of the total in 1993), FRA is placing renewed emphasis on the performance of safety-critical personnel. We do so by ensuring that human factors receive appropriate attention in our enforcement, regulatory, and research programs. For example, our safety personnel are urged to use disqualification authority and individual civil penalty liability where officers or employees of the railroad deliberately violate safety requirements.

Our program to control alcohol and drug use in railroad operations further underscores our commitment. This is an area in which we have made significant progress. In 1988, our total positive rate for alcohol and drugs in post-accident testing was 6 percent. The prior year, 1987, was punctuated by serious alcohol- and drug-involved accidents, including the Chase, Maryland, collision. All of our data indicate that the picture is improving, as testing programs and voluntary peer prevention efforts take hold.

I am happy to report that, based on data that are substantially complete, random drug testing in the railroad industry last year showed a reduction in positive test results for the fourth consecutive year. Reports indicate that of more than 42,000 random tests administered in 1993, only 0.7 percent of employees tested positive. In 1993 mandatory post-accident testing, 2 percent of employees tested positive for prohibited use of alcohol or drugs, down from 6 percent in 1988, and slightly less than the 2.1 percent recorded in 1992. In "reasonable cause" breath alcohol testing, 1.6 percent of employees tested positive, down from a high of 4.5 percent in 1988,

but slightly higher than 1.16 percent in 1992. In 1993, 1.9 percent of employees tested positive for drugs in reasonable cause tests, down from a high of 3.6 percent in 1989 and down from 2.07 percent in 1992. Our preliminary information indicates that in only one of the accidents in 1993 that we investigated was the person who tested positive for drugs or alcohol involved in the cause.

FRA continues to support necessary chemical testing and voluntary efforts to address substance abuse in the railroad work place. On February 15, in response to the Omnibus Transportation Employee Testing Act of 1991 ("Hollings/Danforth Act"), FRA published additional alcohol and drug rules. These amendments require railroads to conduct random alcohol testing and mandatory "reasonable suspicion" testing for alcohol and drugs.

We also actively enforce our rule on qualification of locomotive engineers, which seeks to prevent deficiencies in operator fitness, training, and performance.

However, the current reality is that human performance continues to be a factor in train accidents and incidents, as well as in non-train fatalities and injuries. One of the chief problems appears to be fatigue related not to violations of the Hours of Service Act, but rather, perhaps, to variable work schedules and lack of time off. If Congress adopts our legislation authorizing pilot programs under the Hours of Service Act, we can begin to address these certifiably legal sources of fatigue.

Unfortunately, fatigue is not readily susceptible to an instant solution. Precipitous action could very well make the situation worse, rather than better. However, in addition to proposing this pilot-project authority, we have initiated actions that, over time, will permit us to achieve a better understanding of underlying performance problems. These actions include better definition of existing work and rest cycles and basic research concerning the extent and manner in which irregular hours and other stresses affect fatigue and locomotive operator performance.

FRA is presently sponsoring two research projects on fatigue. First, FRA's Office of Policy has a research project with the Volpe National Transportation Systems Center concerning locomotive crew-calling practices and the relationship of calling practices to crew fatigue. Diaries on work and rest activity will be collected from approximately 400 locomotive engineers. So far at least 200 diaries have been returned from employees on three different railroads. The Volpe Center will be collecting additional diaries from engineers on two other railroads. Employees are asked to rate their degree of "sleepiness" and the quality of their sleep. Second, FRA's Office of Research and Development has a project to evaluate 56 locomotive engineers on simulated, realistic duty cycles and to determine which criteria are critical to engineer alertness. This project, which also deals with the effects of stress, is using FRA's locomotive and train-handling simulator at IIT Research Institute in Chicago. Because only one engineer can operate the simulator at a time and each test requires a week, it will take approximately two years to complete this study. The project is designed to test degradation of engineer performance under known schedule and operating conditions, including work/rest cycles, circadian displacement, sleep deprivation, temperature, humidity, vibration, noise, and related variables. The project is expected to yield results that could be used to develop regulations affecting hours of service, crew-calling and scheduling practices, alertness monitoring, locomotive cab environment, or other matters involving crew vigilance.

Coordination with the States

The State rail safety inspectors are crucial to improving rail safety. FRA's relationship with the 31 States that assist in the enforcement of the Federal railroad safety laws is very important to me. In addition to regular FRA/State meetings, at both the regional and national levels, once a year all FRA Safety headquarters officials and regional directors and State program managers meet together to discuss rail safety concerns. Once the final grade crossing rule is issued, we expect States to be actively involved in its enforcement. State inspectors are regularly invited to settlement conferences concerning civil penalty cases they have initiated. In addition, we are fully involving State inspectors in our new training program by coordinating with the States to assess their training needs and have improved our reporting to the States to keep them up to date on issues of mutual concern by increasing the frequency of our reports to them on such matters as QIP performance and rail safety accident and inspection statistics. We are also doing outreach to encourage other States to join our program.

SAFETY REGULATORY AND REPORTING PROJECTS

The core of FRA's safety program, of course, is the body of safety statutes and regulations our agency administers. As mentioned earlier in our discussion of the Administration's bill, FRA presently has pending over 40 rulemaking actions or reports to Congress. Their number allows me to provide only highlights. FRA has com-

pleted all but two of the initiatives contained in the Rail Safety Improvement Act of 1988 (RSIA) and is hard at work to produce the rules and reports mandated in 1992 by the Rail Safety Enforcement and Review Act (RSERA) or other recent enactments. In addition, FRA has developed its own agenda of regulatory items needing attention and hopes to be able to act on that agenda as the mandatory rulemakings near completion.

FRA's Recent Regulatory Accomplishments

FRA has made important strides in the regulatory area in 1993 and the first half of this year. In that period, FRA has issued final rules on event recorders, random alcohol testing, and protection of utility employees; interim final rules on engineer qualifications and locomotive conspicuity devices; and proposed rules concerning (i) reporting of actions taken to remedy safety violations, (ii) tank car crashworthiness, (iii) tank car inspection, and (iv) hazardous materials containers on flat cars. Many other regulatory notices and reports have, of course, been researched and at least partially drafted in this period, a number of which are very close to issuance.

Remaining Statutory Mandates

The only rulemaking not completed from the RSIA is the final rule on maintenance, inspection, and testing of grade crossing warning devices. Our final rule setting new requirements for reporting problems with grade crossing signal devices was published July 23, 1991. As you know, FRA considered this a necessary predicate to improving our data base on problems related to the safety of grade crossing devices. A proposed rule concerning timely response to grade crossing signal system malfunctions was published June 29, 1992. A second, expanded proposed rule was issued January 11, 1994, and a hearing held on March 1, 1994. The latter proposed rule covers maintenance, inspection, and testing of grade crossing signals. FRA expects to complete its draft final rule for further review within the Administration this summer. Issuance of this final rule is FRA's highest regulatory priority.

The only remaining report required by the RSIA concerns grade crossing demonstration projects. Now that Kansas State University has completed "Highway-Rail Crossing Safety Demonstrations," a look at the use of enhanced reflectorized signs at rural crossings without signals, FRA's final 10 percent will be published in the near future.

Under RSERA, FRA is working on a large number of projects that are in various stages of completion. A brief summary of each follows:

- *Power Brake Rule Revision:* RSERA allowed until December 31, 1993, or only 16 months, for issuance of the final rule. A voluminous draft NPRM is under review within the Administration. FRA's Advance Notice of Proposed Rulemaking (ANPRM), published on December 31, 1992, and four public workshops, held in February and March 1993, generated 1,000 pages of oral testimony and 5,000 pages of written comments. The draft NPRM also addresses issues raised in 1990 petitions filed by the United Transportation Union and the Brotherhood of Locomotive Engineers. The numerous, highly technical issues involved in this rulemaking require careful, deliberate consideration.

Rail Transport Of Hazardous Materials [Report To Congress]: Due in final on September 3, 1993, the draft report is being reviewed within FRA. The staff members assigned to prepare this report were also busy working successfully to meet a September 30, 1993, deadline on issuing two proposed rules dealing with tank car safety.

- *Dispatchers [Report To Congress]:* Due in final on March 3, 1994, a voluminous draft report is being reviewed within FRA. Additional time has been necessary in order to meet with, and receive comments from, the American Train Dispatchers.

- *Radio Communications/ATCS [Report To Congress]:* FRA held a public inquiry on this issue on March 29. The report, due July 3, 1994, is being prepared.

- *Track Standards Revision:* The final rule is due September 3, 1994. An NPRM is being drafted. This will actually be two separate rules: one on track structures, the other on the protection of track workers. The Brotherhood of Maintenance of Way Employees and Brotherhood of Railway Signalmen have asked FRA to issue emergency orders addressing the latter, and we are carefully considering their requests.

- *Remedial Actions Reporting:* The NPRM was issued in June 1993. The draft final rule, due to be issued in final on September 3, 1994, is being reviewed within FRA.

- *Regional Attorney Pilot Project [Report to Congress]:* The report is due September 3, 1994. The Kansas City phase of the project ended in December 1992; the Atlanta phase of project began in February 1993.

- *Locomotive Crashworthiness and Working Conditions:* A report or rule is due March 3, 1995. Research on technical issues continues. This, too, is likely to become two rules: one on crashworthiness, the other on locomotive working conditions.

- *Accident Reporting Threshold Revision:* An NPRM addressing this issue and others is being drafted.

In addition to RSERA, there are other statutorily mandated projects to be completed. As you know, the pending hazardous materials reauthorization may well require issuance of final rules on tank car inspection (HM-201) and tank car crashworthiness (HM-175A). That legislation may also require a study of the placement of hazardous materials cars in a train and, perhaps, the make-up of trains. Also, under a different statute, FRA must issue a final rule on locomotive conspicuity by June 30, 1995.

FRA's Own Regulatory Agenda

In addition to these mandated actions, FRA is pursuing a number of important safety subjects that were of necessity put aside in the wake of the substantial requirements of the RSIA, RSEPA, and other recent statutes. These include such matters as the drafting of rules concerning high speed rail trainsets, improvements to our engineer certification rule, operating rules filing, maintenance-of-way freight cars, amendments to our bridge worker safety rule, and a variety of needed changes to our procedural rules. FRA also has pending a variety of other regulatory matters that need attention, e.g., the AAR's rulemaking petition regarding discolored wheels and petitions for reconsideration of the utility employee rulemaking. As you can see, our rulemaking agenda is already very full. We solicit the Committee's support of our efforts to complete the current agenda before significant new items are added to it.

GAO REPORT ON AMTRAK PASSENGER CAR SAFETY

In its September 1993 report, GAO asserted that Amtrak has not been effectively implementing its system to ensure that passenger cars comply with its internal maintenance standards, that Amtrak has been deferring maintenance for budgetary reasons without identifying safety-critical thresholds beyond which cars would not be allowed to operate, and that FRA has issued few regulations for passenger cars and lacks minimum safety standards for most passenger car mechanical components. Based on these findings, GAO recommended that FRA take two actions: first, that FRA conduct a study of all passenger railroads to determine whether it is necessary to issue passenger car component regulations and, second, that FRA issue any such regulations that the study shows advisable, taking into account the passenger railroads' own internal standards regarding such components.

In FRA's judgment, Amtrak and the other passenger railroads have had a strong safety record overall, especially as that record relates to accidents caused by mechanical problems on passenger cars. See attached chart, "Federal Railroad Administration Accident Statistics Regarding Passenger Equipment Safety."

FRA has begun to conduct an intensive nationwide compliance survey on the Amtrak system. In addition, FRA is working with Amtrak to ensure that Amtrak has defined minimum safety standards for safety-critical components and will verify compliance with those standards through field inspections. Finally, FRA will in the near future propose revised requirements for inspecting safety-critical components of conventional passenger equipment with regard to power brake safety and is working to develop safety standards appropriate to the next generation of high speed rail equipment that will first begin operating in the Northeast Corridor toward the end of this decade.

HIGH SPEED RAIL

Current regulations permit train operations to 110 miles per hour under specified conditions. Amtrak operates Metroliner service to 125 miles per hour between Washington and New York under a longstanding waiver. Of course, the Northeast Corridor from Washington to New York is principally dedicated to passenger movements during peak hours, and the line is fully grade-separated. Many enhancements in the safety of operations have been made along this route, and we continue to look for additional opportunities to reduce accident risk.

The challenge now before us is to define conditions under which high speed rail can be safely provided on other corridors where passenger and freight operations share the right of way and many highway-rail crossings currently exist. FRA has approached this challenge with both short-term and longer-term strategies. The long-term strategy began with the extensive set of high speed ground transportation safety studies under our research and development program. This strategy will, over

a period of several years, yield a broad range of generic safety standards for high speed rail.

Our short-term strategy focuses on the North End of the Northeast Corridor (New York to Boston), where speeds to 150 miles per hour will be required to meet statutory trip-time goals. The North End is a very active program for which the Administration has requested substantial resources, and we are committed with Amtrak to seeing this project to a successful implementation. We are working with Amtrak and other participants to ensure that safety is its foundation. We also recognize that this planning process provides a valuable opportunity to test our general high speed rail safety objectives against very concrete challenges. Stated differently, specific focus on the North End will be necessary both to deliver safety guidance for that project in a timely manner and to provide the experience on which generic standards can later be founded.

We have interwoven our long-term and short-term strategies in the following way, summarized by the technical subject matter:

High speed trainsets. The first acquisition of trainsets for service at greater than 125 miles per hour will be Amtrak's procurement of 24 electric trainsets and 2 non-electric trainsets under the Northeast Corridor Improvement Project. FRA is working intensively with Amtrak to ensure that all significant safety-relevant objectives are incorporated into its forthcoming procurement. This dialogue is providing important insights that will help FRA as we move toward generic high-speed-rail equipment standards.

Our generic rulemaking for high speed equipment will begin this year, and we will proceed the rulemaking at a pace consistent with (i) faithful completion of statutorily mandated rulemakings and (ii) progress in development of other high speed corridors. Meanwhile, a very important element of equipment safety—the power brake system—will be addressed through our current revision of the power brake regulations.

Track safety. Track safety at speeds above 110 miles per hour requires careful attention to vehicle/track interaction, as well as the track structure itself. Our forthcoming notice of proposed rulemaking on revision of the Track Safety Standards will address this issue.

Signals and train control. The North End presents special challenges because of Amtrak's determination that much of the infrastructure of the existing cab signal/automatic train control system should be used as a building block for a new system. The new system will meet critical performance criteria that FRA has asked Amtrak to employ in designing its system:

- Positive stop, i.e., the train control system will not allow a train to pass a key control point without authorization, even if the operator acknowledges the cab signal indication;
- Speed control, including civil engineering speed restrictions (at curves, bridges, stations) and temporary slow orders.
- Protection of maintenance-of-way forces working on track.

Because Amtrak's proposed system involves novel technology and will affect multiple operators on the NEC, FRA will soon propose an appropriate order. The scope of this proceeding will be positive train control on the Northeast Corridor under future conditions where train speeds increase.

At a later date, FRA will deal with signal and train control performance requirements on other high speed corridors. Because the technology employed on those corridors may be communications-based and software-driven, it may present unique regulatory issues regarding verification of fail-safe characteristics. That rulemaking will, of necessity, be undertaken only after technology development has reached a more advanced stage.

Highway-rail crossings. The North End of the NEC highway-rail grade crossings remaining, and we are working to make further reductions in this number. Under no circumstances will train speeds over any remaining crossings exceed 140 miles per hour, and further improvements in crossing warning systems will be undertaken as necessary. Under section 1036 of the Intermodal Surface Transportation Efficiency Act (ISTEA), FRA is funding several promising approaches to risk reduction at grade crossings, including an installation of four-quadrant gates and a vehicle-detection system at the School Street crossing in Groton, Connecticut. FRA is also working with States and developers to examine barrier systems capable of preventing entry onto a high speed rail line.

FRA's guidelines under section 1010 of ISTEA prohibit any at-grade crossings where train speeds exceed 125 miles per hour and permit crossings above 110 miles per hour only if effective barrier and detection systems, interlocked with the signal system, are successfully demonstrated and implemented. As the range of options for warning/detection systems and barrier technology continues to grow and additional

corridor projects proceed, it will be timely to conduct a rulemaking on grade crossings as an element of high speed rail safety.

System safety integration. Ensuring that overall system safety has been planned as an integral element of a high speed rail program requires attention to integration of safety measures and, in addition, consideration of a wide range of safety issues that are not addressed by existing FRA standards. Since these issues involve potentially complex tradeoffs among possible countermeasures, once certain basic standards have been shown to be satisfied, it will always be appropriate to consider a high speed rail project as a whole and on its own merits.

At an appropriate time in the planning process, FRA expects to conduct a North End system safety proceeding to address such matters as security of the right of way (against inadvertent incursion, vandalism, trespassing, etc.), detection of damage to structures, operating rules and practices, emergency preparedness, etc. That proceeding may yield insights that will help FRA fashion a more generic approach to acceptance of system safety plans applicable to high speed operations.

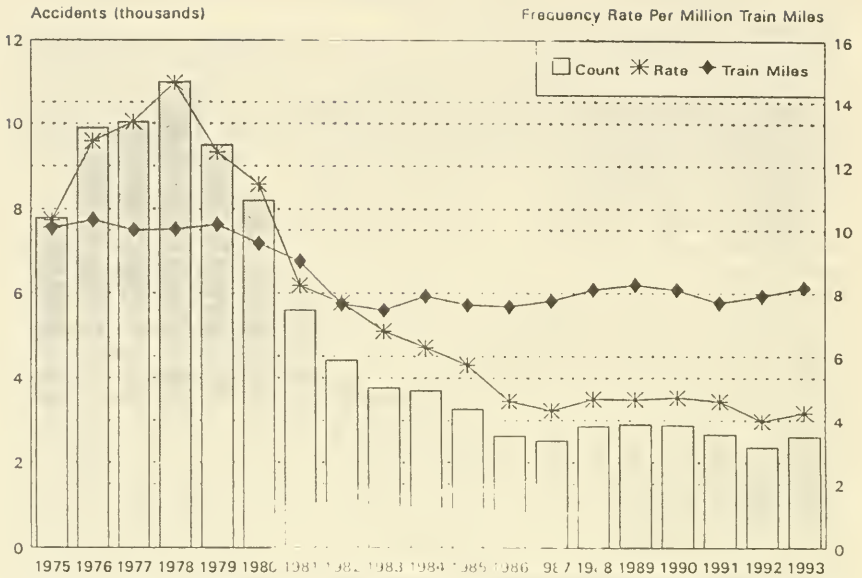
Track aspects of high speed operations are being addressed in the revisions to the Track Safety standards currently being drafted and which should be issued as proposed rules in 1994. As high speed operations begin to develop outside the Corridor, many other issues will confront us, perhaps the greatest of which is grade crossing protection. At higher train speeds, grade crossing collisions become an increasing threat to the railroad vehicles involved and their occupants. Accordingly, FRA is sponsoring research on innovative systems, such as mobile barriers, designed to prevent the intrusion of vehicular traffic onto the railroad right of way rather than just warning that traffic of oncoming trains. Of course, if entirely new systems on completely separate rights of way are developed, we will need to address those through more comprehensive rules that recognize the interdependent nature of the components of such systems. For example, a maglev system or a 200-m.p.h., stand-alone, steel-wheel system raises many issues we do not yet face in operations that take a more phased approach. In this way, we plan to provide high speed ground transportation the regulatory attention it merits in the large scheme of railroad safety, knowing that our limited resources must focus on immediate needs without losing sight of the future.

CONCLUSION

FRA's safety program, which has helped produce dramatic improvements in railroad safety in the last decade, is being reinvented in many ways to enable FRA to meet the challenges of this decade and the next century. We are establishing or improving several programs that will enhance our ability to make rational regulatory and enforcement decisions based on better data on inspections, compliance, accidents, and incidents and that will result in even higher quality customer service. The changes we are implementing are prompted by the policy initiatives of the President and the Secretary and by the sound advice of the experienced and capable career professionals in our Offices of Safety, Research and Development, and Chief Counsel and in participating State programs. FRA is committed to working with all segments of the railroad industry to improve railroad safety. At the Federal, State, and local levels, we continue to strengthen existing programs and cultivate new programs that bring us closer to achieving our goal—improved safety.

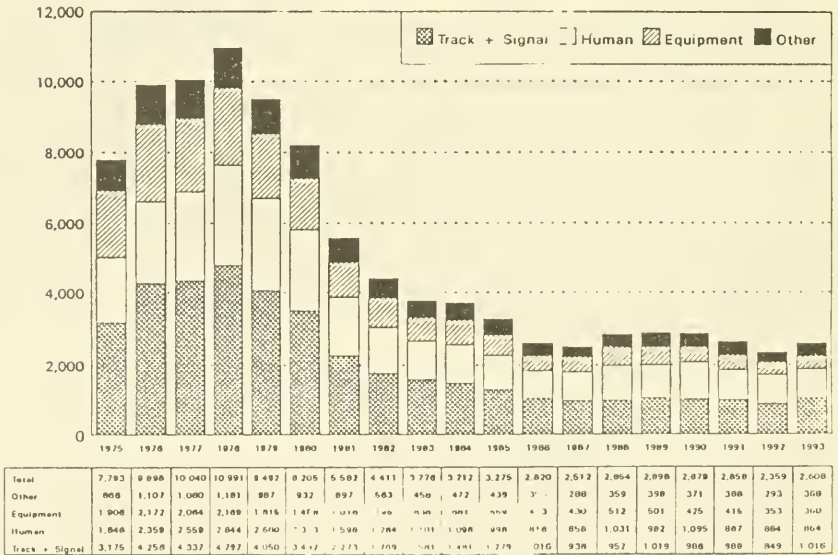
In closing, Mr. Chairman, thank you for inviting us here today. We will be happy to respond to any questions.

TRAIN ACCIDENTS



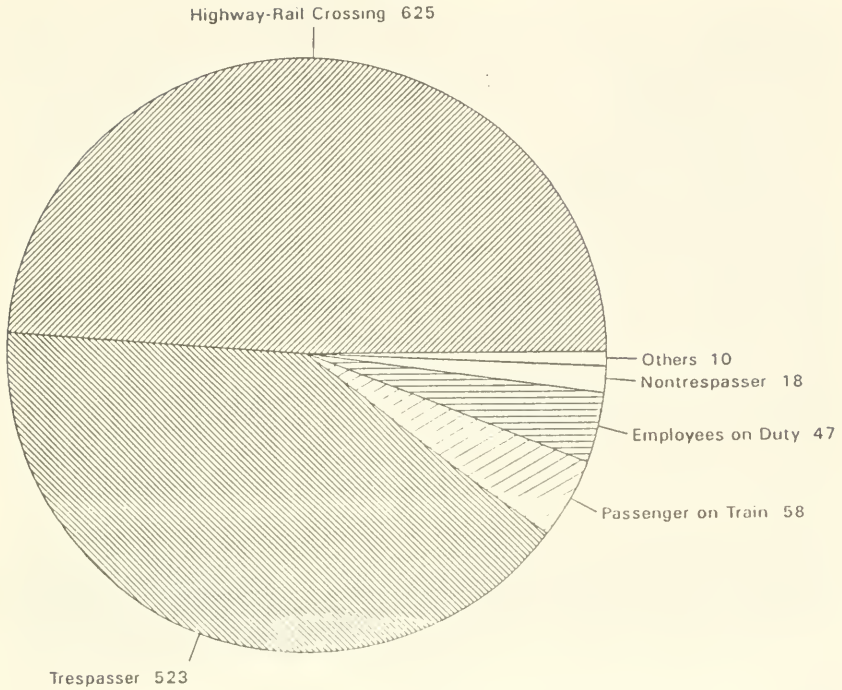
In order to obtain comparable scaling, train miles have been divided by 100,000 on this chart. Train miles are displayed using the left axis. Excludes highway-rail accidents/incidents. 1993 counts are preliminary.

TRAIN ACCIDENTS BY CAUSE



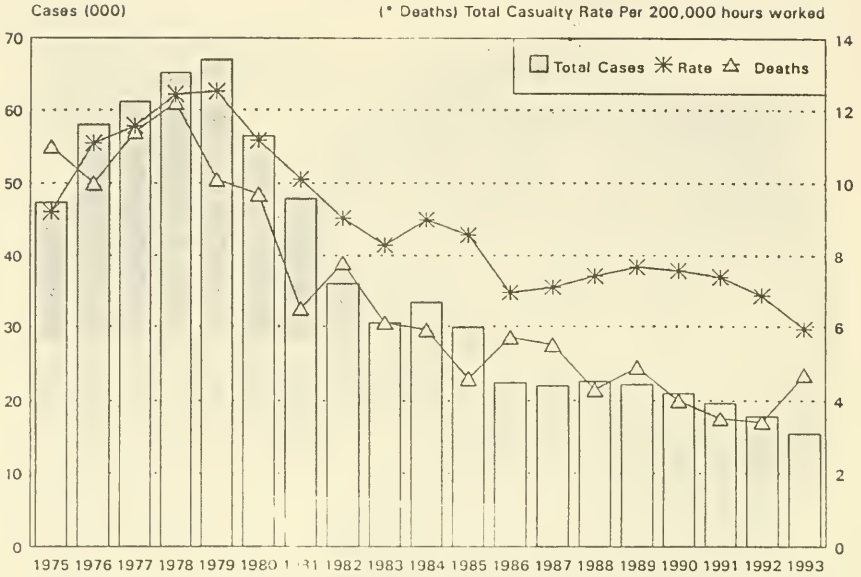
1993 counts are preliminary. Excludes highway-rail accidents/incidents.

1993 TOTAL FATALITIES



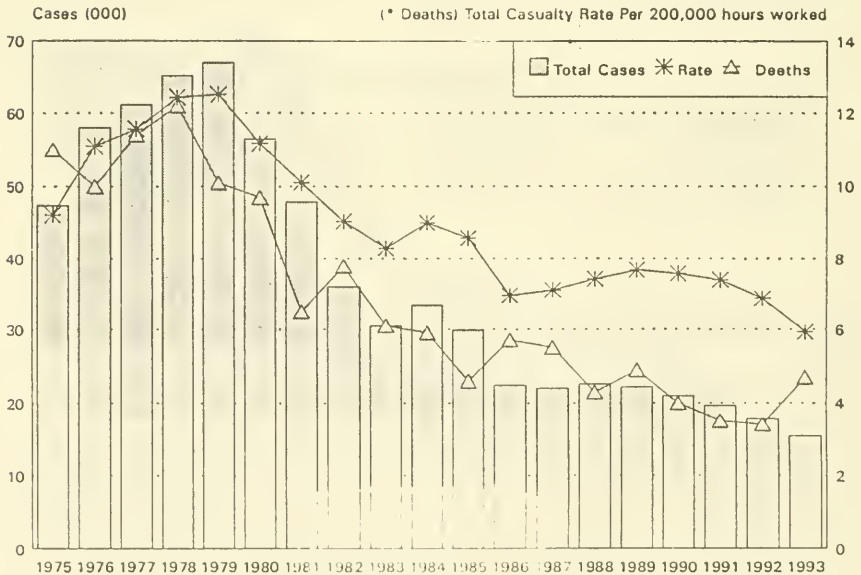
All deaths associated with highway-rail accidents are included in highway-rail total.
Three on-duty employees are included and also appear in the employee on-duty count.

EMPLOYEE ON DUTY CASUALTIES



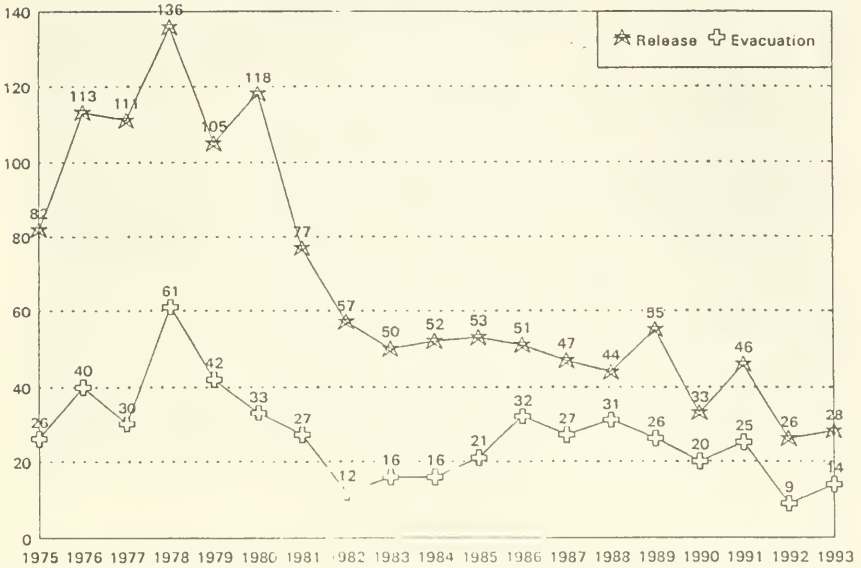
Total cases include fatalities, plus nonfatal injuries and illnesses. * Deaths have been divided by 10 to maintain scaling. 1993 counts are preliminary.

HIGHWAY-RAIL CROSSING ACCIDENTS



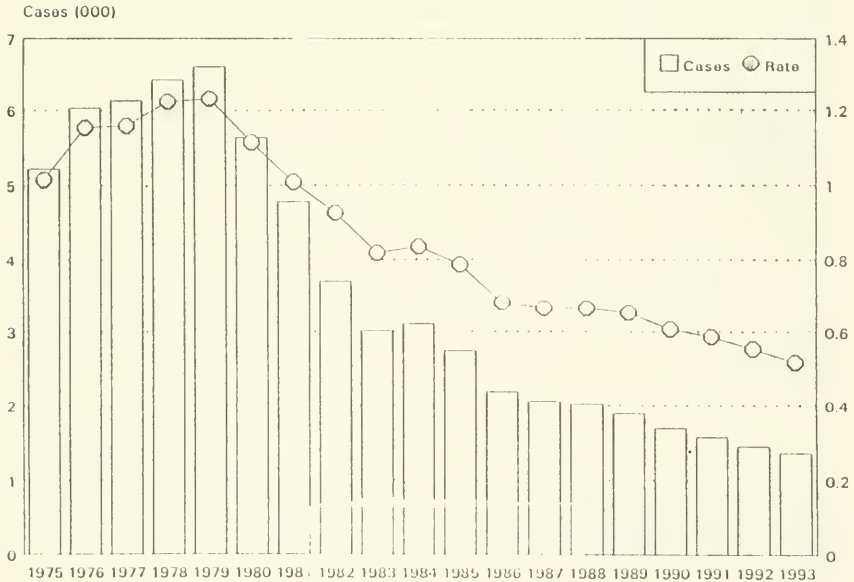
1993 counts are preliminary.

TRAIN ACCIDENTS INVOLVING HAZMAT



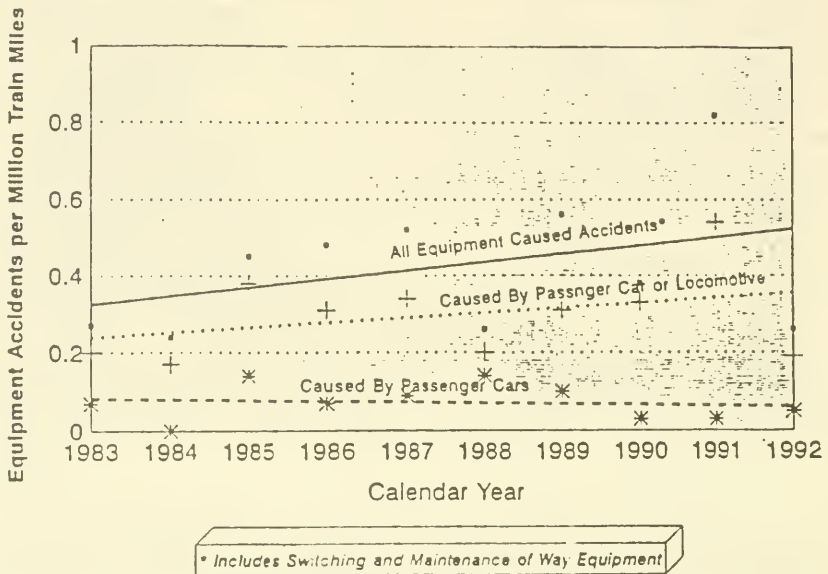
The number of accidents that resulted in an evacuation is a subset of accidents in which there was a release of hazardous materials. Highway-rail accidents are excluded. The counts are preliminary for 1993.

SERIOUS INJURIES TO EMPLOYEES ON DUTY



Amputations, fractures, hernias, concussions, internal injuries, loss of eye, dislocations. 1993 counts are preliminary.

APPENDIX I—FEDERAL RAILROAD ADMINISTRATION ACCIDENT STATISTICS REGARDING
PASSENGER EQUIPMENT SAFETY



Appendix I of the GAO report displays Amtrak's accident/injury data as reported to the FRA. The GAO report uses this data to support the recommendation that Amtrak implement minimum safety standards for passenger railcars. While the FRA does not take issue with the recommendation, closely examining the statistics shows that the 10-year accident history for passenger cars reflects a much more positive record than is conveyed by the GAO report's portrayal of the data. The results of FRA's analysis are shown above.

The upper trend line represents Amtrak's overall equipment-caused accidents normalized per million train miles. This trend line comes directly from the data published in the GAO report's Appendix I and includes accidents caused by switching equipment and by maintenance of way equipment. The middle trend line represents the accident rate for passenger equipment including locomotives. The lowest trend line represents the rate for accidents caused by defective passenger cars only. The data in this disaggregated form shows that the frequency of accidents caused by passenger car defects is extremely low, and no negative trend is evident.

Senator EXON. Madam Administrator, thank you very much for your excellent statement. I just have one question now. I am looking at the 1993 serious-injuries-to-employees numbers which have dramatically decreased since 1979. Those are just numbers of injuries and have no relationship to the ton-miles hauled or anything like that?

Ms. MOLITORIS. Those are injuries—it is just per year.

Senator EXON. What I am trying to point out is this decreases per year is at the same time that I believe our overall rail traffic has been increasing. I guess what I am saying is the rate of traffic increase would make the charts more dramatic. Do you or any members of your staff know offhand how much—

Ms. MOLITORIS. Traffic has increased in that time? I do not know.

Senator EXON. Is it 10 percent or 20 percent? Does anyone have that figure?

Ms. MOLITORIS. I know one thing that just gives you a small clue, and that is in terms of the first quarter of 1994, intermodal traffic has increased somewhere between 9 and 10 percent. So, right now we are growing dramatically, but I do not know—late in the seventies it was not that big a growth.

Senator EXON. Would you get that for the record for us.

Ms. MOLITORIS. Most certainly.

Senator EXON. I think that might add some emphasis to those charts, because I suspect you will see a rather dramatic increase.

[The information referred to follows:]

Serious Injuries¹ to Employees on Duty

	1979	1993		1979	1993
Frequency	6,580	1,348	Rate per billion revenue ton-miles ²	7.20	1.22
Rate per million train-miles ³	8.62	2.20	Rate per million employee-hours	6.11	2.59

¹ "Serious injuries" are those involving dislocation, fracture, amputation, hernia, concussion, internal injury, or loss of eye.

² "Revenue ton-miles" are revenue freight traffic measured in ton-miles. "Ton-miles" are units of measurement equal to the movement of 1 ton of railroad loading for a distance of 1 mile.

³ "Train-miles" are units of measurement equal to the movement of one train for a distance of 1 mile.

Revenue Ton-Miles

[Billions]

Year	Ton-miles	Year	Ton-miles	Year	Ton-miles
1979	913.7	1984	921.4	1989	1,013.8
1980	918.6	1985	877.0	1990	1,034.0
1981	910.2	1986	874.6	1991	1,038.9
1982	797.8	1987	948.0	1992	1,066.8
1983	826.2	1988	996.2	1993	1,106.7

Senator EXON. Early in your statement, you gave us a number, and I believe it was how many deaths occurred as a result of railroad accidents last year. What was that figure? I believe it was in the opening page or two of your statement.

Ms. MOLITORIS. Well, I know 90 percent of deaths come out to about 1,200—oh, let me see, 58.

Senator EXON. It is 58. That is passengers on trains; is that correct?

Ms. MOLITORIS. Right. And they are actually broken down: employees on duty, 47; nontrespassers, 18; others, 10. And then you see the majority are the grade crossing, 625; and trespasser, 523.

Senator EXON. Well, that is a good chart. If you had that up, I did not see it. Of course, these are tragedies. When we have passenger trains, you have a chance of killing a lot more people, because people are riding on the trains, as opposed to freight. But I think the chart which you have up there now shows us that trespassers and highway grade crossings are still where we kill most of the people.

Ms. MOLITORIS. Ninety percent.

Senator EXON. Ninety percent. So, if we could eliminate, somehow, all of those smaller categories represented by the yellow and the two red lines on there, if we do not do anything about the rest of it we have not even put a dent in what we would like to get done in the overall reduction of fatalities.

Ms. MOLITORIS. Well, and, Mr. Chairman, I think that is why the Secretary is so adamant and said yesterday that this is one of his

top priorities, because these are preventable. And with relation to Senator Hutchison's remarks, the whole issue of awareness, although we know how to do it, it requires, clearly, a level of investment and a level of effort that we have not yet reached, and that is one of the reasons why we have asked for an increase in resources for Operation Lifesaver. And we look forward to working, all of our administrations, with Operation Lifesaver even more closely than we have before.

Senator EXON. Madam Administrator, as you know, as a result of a bill which I have introduced we are to hear from FRA on the advanced train control system designs and implementation. The report was due early in July. We have been told that it likely will be reported to us on July 3. That date still holds, I hope?

Ms. MOLITORIS. We feel—we have the final draft in our office. We feel very good about that. Let me just make a couple of comments, Mr. Chairman. When I came to FRA, I knew that this critical issue was going to be very important while I was there, and consequently the Administrator's roundtable, the very first one, focused on this issue. And the challenge to our constituents was we are going to the Congress with a report; we are working closely with NTSB, Chairman Vogt, and all the members; and we challenge you to work with us in a new way.

We have gotten enormous cooperation from all of the industry members, labor, management, suppliers, everyone, and we think the report will be very comprehensive. The only comment I would make is that when it leaves our office there is still a clearance process, and we think we are going to get great support from the Secretary to encourage the timeliness of that so that I can arrive and give it to you on July 2. We would like to be a day early.

Senator EXON. Well, Ms. Molitoris, I thank you for your comments. And if it is due on July 3 and it takes you until July 4, we will have no complaint whatsoever.

Ms. MOLITORIS. We will send a little flag with it.

Senator EXON. My time is up on the first round. Senator Hutchison.

Senator HUTCHISON. Yes. Let me just ask you a couple of things, because I think it is becoming more and more clear that we have got to be careful, with our regulatory hats on, to go for what really makes a difference and not harass the businesses that are in business. And you say that you have 40 rulemakings and reports now under development; how do you set priorities in your activities and do you have a risk assessment factor in how you set your priorities?

Ms. MOLITORIS. Senator, one of the great favors that the chairman did for the FRA was to allow Don Itzkoff to come to be Deputy Administrator, and his responsibility, among many, is the management of the rulemaking process. And Don has worked closely with our Safety Office, with Bruce Fine, our Acting Associate Administrator for Safety, and Grady Cothen, who has responded, as he always has done, to focus on the rulemaking issue.

Because clearly when I arrived, and even before, FRA was in a deep hole, a regulatory hole, and I think part of that occurred because some of our customers, our constituents, got frustrated that they were not getting the opportunity to be heard well, and we are

hoping to change that environment so that everybody feels they have a piece of the action and a part of the decisionmaking. But considering that we must respond to our statutory rulemakings, Don has devised, with our safety staff, a prioritization, a tracking system.

The Safety Office and Chief Counsel's Office meet every other week to discuss their progress on all the rulemakings. Don's management includes advice on the priorities and the resources that we are setting to achieve closure on all of these regulatory requirements. I think that we are making progress. We are not out of the woods yet, and that is why we are hoping, in this bill, to ask for a minimal level of increased responsibility with regard to rule-making so that we can finish our work, clean our slate, and be up to date and on time.

Senator HUTCHISON. Do you have risk assessment factored into where your priorities are?

Ms. MOLITORIS. When you say "risk assessment," you mean the most important ones? That is what the prioritization is all about. In addition, we also have cost-benefit analysis as a key element of the process. And, in fact, that element of the work is now starting at the beginning of the process, instead of being factored in later, so that those key data, that key information, really do impact how the proposals move forward.

Senator HUTCHISON. OK, let me move over to Operation Lifesaver and just ask you do you have, do you think, everything you need to do Operation Lifesaver, and is it mostly now—I mean, it appears to be, I think, the awareness-type solutions.

Ms. MOLITORIS. Do you mean in terms of improving the numbers at the grade crossings and reducing the deaths? Operation Lifesaver is a critical piece of what our initiative is from the Department. We are asking for more funds, more resources for Operation Lifesaver. In addition, there are two other steps that are very important. We have gotten the resources to identify eight—we have eight regions, for each region an individual from the Safety Office who is responsible for working directly on the grade crossing issue, both the signals and working with Operation Lifesaver in the States.

Above and beyond that, we have asked to be part of the national service initiative where we would fund an additional person to work at the State office, each State office of the Operation Lifesaver effort. However, in addition to the public awareness development, we have also asked for, among our 55 initiatives, the idea of looking at some ways that FHWA can increase awareness among the drivers, so that when you have truckdriver licensing requirements, the whole issue of grade crossing safety will be put on a higher level of priority, that FHWA regional directors will talk to their constituents about this important and critical issue.

So, I think that our initiatives, if passed in our legislation—and we are putting forward many of those things now that we have the authority to do—we should be getting a real feedback on that and see some positive response from that.

Senator HUTCHISON. Let me just quickly ask, because my time is just about up, do you have initiatives in the schools, in the public schools or private schools, any schools for children, where you are

trying to educate them at this first level about the hazards of railroad crossings?

Ms. MOLITORIS. As a matter of fact, our inspectors in the regions are really heroes in this area because they have often given of their own personal time to go to schools, from elementary through high school, to give presentations at PTA's, at local entities to get out the message of awareness.

But, you know, it is a very labor-intensive issue. It is about changing people's behavior. And someone said to us at the press conference yesterday, well, people know they cannot beat a train; how do you think you are going to do any better? The fact is people knew that if they wore their seatbelts they would have a better chance of living, but the fact of the matter is it took a big campaign to change their behavior. The same thing about drunk driving. We are making progress, but it is almost an inch-by-inch process.

Senator HUTCHISON. Thank you.

Senator EXON. Thank you, Senator Hutchison. I also want to welcome the rest of your team.

Ms. MOLITORIS. May I introduce them, please, Mr. Chairman?

Senator EXON. Yes.

Ms. MOLITORIS. OK. Mark Lindsey, who is our Chief Counsel, and I am sure that you and he have worked together before; Donald Itzkoff, who is the Deputy Administrator, and I know you have worked with him before; and Grady Cothen, who is the Acting Deputy Associate Administrator for Safety with a focus on the rule-making agenda.

Senator EXON. Well, thank you. You have gathered a very excellent team around you and I congratulate you for that, Madam Administrator. I do not know from where you stole the two people on the outside, but I know where you got Mr. Itzkoff. However, we harbor no ill will toward you.

Ms. MOLITORIS. Thank goodness.

Senator EXON. I would simply point out, for the record, that you did not steal Mr. Itzkoff until after you were confirmed, which I thought was a brilliant move on your part. [Laughter.]

Ms. MOLITORIS. Prudence. Prudence, Mr. Chairman.

Senator EXON. I have two questions to ask you, and then some additional questions for the record. Madam Administrator, the National Transportation Safety Board has submitted testimony stating that no comprehensive regulations currently exist in the United States for railroad passenger car safety standards. It is believed that effective passenger rail standards could help minimize tragedies such as the July 18, 1993, commuter rail accident in Gary, IN, that unfortunately killed seven passengers. What initiatives is the FRA currently undertaking to implement safety standards regarding the design, the makeup, and the overall crashworthiness of rail passenger cars for Amtrak and commuter rail?

Ms. MOLITORIS. The passenger car safety issue is one that we are focused on and working very hard to address. The GAO report on Amtrak passenger car safety brought up a lot of very good issues, and we are responding to those. For example, Amtrak has some very old equipment, as we all know, and the importance of keeping those maintained and operating them effectively is one that we have been working on with Amtrak closely.

As you know, some 10 or 12 years ago when this issue arose before, the Department said that our working relationship with Amtrak was good enough, and the results showed that these were safe vehicles. The fact is, getting into higher density traffic and having higher speed operations and more ridership means that in this environment we need to look at this issue again.

As you know, in terms of direct design issues we are working on the high-speed rail procurement and the critical safety issues that those are involved with. What sometimes people do not understand is that there will be enormous fallout benefits to all rail passenger equipment. The high-speed rail procurement and the issues of safety around that are our biggest challenge, and if we can resolve and address the issues of crashworthiness and all of the other issues with Amtrak, then all of that work will benefit future buys on regular Amtrak passenger equipment.

In addition, I brought with me just as a sample the kind of work we are doing with Amtrak with regard to emergency preparedness. These cards have to do with the locomotive inspection, but it shows the kind of initiative that Amtrak has in terms of voluntarily working with us to come up with a user-friendly piece of reference material to help get the inspection up to a very high level of efficiency and effectiveness.

In addition, we are doing a national review right now of Amtrak equipment to be sure that the maintenance and the inspection techniques of these passenger cars are up to the highest level. So, although the traditional rulemaking procedure on car equipment is probably sometime down the road, the ongoing activity gives us a good level of confidence that the safety of passenger cars is one that will merit the public's confidence.

Senator EXON. Thank you. I applaud the Secretary's grade-crossing safety initiative. As you know, with your experience with the Ohio DOT, there is a great deal of resistance toward testing, developing, and deploying new grade-crossing traffic control signs and devices. We have worked for years to fully test an automated horn system in Gearing, NE. It finally is in place, and we are looking forward to the first report on that. It might well be that a breakthrough is at hand on that new horn at signal location.

Joe Pace, an inventor from Omaha, has been seeking approval from the State, Federal, and local agencies to test an automated grade-crossing device. Mr. Pace is reportedly frustrated that there are not enough FRA facilities to clear policy for testing new crossing systems. What do you have to say about this as the Administrator? What can be done to facilitate the innovation and safety improvement of grade-crossing signs, signals, and devices?

Ms. MOLITORIS. Mr. Chairman, we are happy, too, about the horn testing in Nebraska, and we were happy to be able to work with you on that.

Senator EXON. Thank you for your help on that matter.

Ms. MOLITORIS. Because I think that really shows that partnership really works. And I think that you have heard the Secretary enough to know that he and the President, along with all of his team, are committed to research and development. In fact, in our 1995 Presidential budget proposal which is before the Congress we have asked for a significant amount of money to test new high-

technology rail technology with a real focus on trying to emphasize the defense conversion opportunities which will take the creative genius that has been so obvious in the defense industry and bring all of those merits into whatever areas of rail transportation it can help.

I think there are clearly teams involved in the signal and train control industry. We are looking at grade-crossing high-technology initiatives and have demonstration projects that are already beginning in that area. We believe that if we are fortunate enough to get the President's proposal that that kind of high-technology focus and initiative will even be increased because we will have more resources to put to the problem. And I would encourage your constituent to contact me personally, and I will be sure that his case is heard and get him involved in the process as soon as I hear from him.

Senator EXON. Thank you very much. We will contact Mr. Pace, and for the record if you could possibly check with the Agency and see what they know. I mean, it is very difficult for us as lay people to make a determination on this.

[The information referred to follows:]

As you know, warnin devices for highway-rail grade crossings are highway traffic control devices, which are governed by the Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways. In order to ensure safety, the Federal Highway Administration is responsible for reviewing and approving all applications for authority to experiment with any device not in conformance with the manual. The process for obtaining authority from FHWA to experiment with nonconforming, technologically advanced traffic control devices, such as Mr. Pace's, is covered in section 1A-6 of the manual.

My staff has kept a close dialog with FHWA staff concerning the status of Mr. Pace's application to experiment with his device, and, at the present time, FHWA is awaiting the results of driver behavioral tests and offhighway circuitry and hardware reliability tests. For safety reasons, the FHWA needs these data before it can authorize experimentation with the device at a crossing located on a road open to the public. Upon FHWA's receipt of these data, we look forward to working with Mr. Pace and other applicants pursuing innovative technologies that would lead to enhanced safety on the Nation's railroad system.

Senator EXON. I suspect that everybody has some trouble with bureaucracy, but I know as Administrator you have been trying to hack away and get rid of some of that delay. But, of course, when we are talking about safety we have to go through the usual procedures to make sure that a device that is for safety does in fact create the climate for additional safety.

Madam Administrator, there will be other questions for the record. Thank you once again for being here today. It is always good to have you, and I thank you for the excellent job that you are doing over there. I hope you can leave our midst today with a commitment that you will not be pirating any more of our staff in the immediate future.

Ms. MOLITORIS. Do I have to promise, Mr. Chairman? [Laughter.]

Senator EXON. You are not under oath so we will not hold you to it.

Ms. MOLITORIS. Well, I would always come to you for guidance, Mr. Chairman.

Senator EXON. Thank you very much, and with that you are excused.

The next witness today is the Honorable Carl W. Vogt, the Chairman of the National Transportation Safety Board. Mr. Vogt, would you come forward at this time? We apologize for what must seem a very lengthy delay. Unfortunately, we had to interrupt the hearings for that one vote, but we always look forward to your appearance here, Mr. Vogt. You probably have heard most of the testimony today and get the clear impression that we on this subcommittee are very conscious of safety. You are in the best position to give us some "dos and don'ts," some suggestions on where we should be going in the future.

Your full statement already has been incorporated in the record, Mr. Vogt, but at this time I would be glad to recognize you for any summary of your remarks which you would care to make. Then, we will proceed to questioning. Welcome, Mr. Vogt.

STATEMENT OF CARL W. VOGT, CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD; ACCOMPANIED BY ROBERT LAUBY, CHIEF, NATIONAL TRANSPORTATION SAFETY BOARD RAILROAD DIVISION

Mr. VOGT. Thank you, Mr. Chairman. I appreciate the opportunity to be here. I have with me Bob Lauby who is the head of our Rail Division, and he will be manipulating some of these pictures and also available to answer your questions.

I would like to briefly enter a summary of my remarks, Mr. Chairman. First of all, I would like to give you an update on the recent accident in Nebraska. But before I do that I would like to extend my personal thanks to you and your staff for a lot of help that they gave us when our team went out there. I was a member of that team and Claire Nicholas in your North Platte office was of great help to us. There were two events going on at that time in North Platte. One was the Buffalo Bill Rodeo and the other was Nebraska Days, which meant that finding hotels and rental cars was difficult. And she certainly came to our rescue and we really do appreciate that.

Senator EXON. Thank you, Carl. I will pass that along to her. She is a very valued employee. I am glad she was able to be of assistance to you out there.

Mr. VOGT. If she is interested in a job with us here we would certainly entertain that. [Laughter.]

As far as the collision is concerned, as you know a loaded Burlington Northern eastbound coal train struck the rear of a second BN eastbound coal train that was stopped on a dual track. The train that collided with the rear end of that stopped coal train was going approximately 43 miles an hour at about 4 a.m. in the morning on a rainy night with lightning and heavy rain.

Those two trains when they collided derailed and rolled over onto the clear track, where within 15 to 20 seconds they were struck by a westbound Burlington Northern empty hopper coal train that was traveling at approximately 55 miles an hour. The two crew on the eastbound train that collided with the stopped train were killed. The two crew members on the westbound train leaped out of the cab only about 100 yards from the point of impact with the two derailed eastbound trains.

Our team was out there for several days and we have now completed our onsite investigation. Site distance tests, and measurements have been made. As you know, we will be proceeding with our factfinding for some time and will keep you posted on any further developments as they come along, but that is the status of it as of right now.

It is part of our concern, and I want to lead into some thoughts about positive train control that at this site the industry's most up-to-date signal system, the centralized traffic control or CT system, was in effect, which means that dispatchers control all the switches and signals by remote control. This same system was also in effect in Kelso, WA, where we recently had also a head-on collision between two freight trains. And these are just two of a number of collision accidents that we have investigated over the past few years.

Positive train separation is something that has been on our "most-wanted" list since 1990 and it is an issue of great concern to us. About 70 to 80 percent of railroad accidents investigated by the board involve human error, and anything that involves redundancies that will allow human error not to result in an accident in any mode of transportation is of great interest to us. We see positive train separation control as a redundancy that will make up for the kind of human error that we know is going to unfortunately occur in spite of all of our best efforts.

We are very much encouraged by what has been occurring since January of this year by the industry and by the FRA. We think that very serious efforts are underway to determine the feasibility and the cost of positive train control systems. And as you mentioned earlier, the experiment on 750 miles of track in the Northwest is something that we are extremely interested in seeing how it develops.

Senator EXON. Mr. Vogt, let me interrupt you right there. I want to ask you a question, and maybe it is timely to ask it now. Is the Safety Board intimately involved in the operation that is going on in cooperation with Burlington and Union Pacific?

Mr. VOGT. We are not intimately involved in the sense that we are direct participants, but we are going to be very intimate observers of this process. And to date, the AAR and the Government have been very, very cooperative in sharing all of their information with us and we expect that that will continue.

This whole concept of technology in transportation is one of great interest to us. We have seen innovations in global positioning systems—GPS, for example, in aviation that are mindboggling. It develops at an exponential rate. Now, for \$500 or \$600 you can buy a hand-held GPS that will tell you within only a few feet your exact location. I had one of them on a recent flight into Moscow, and we knew exactly where we were, maybe even better than the pilots given the condition of their air traffic control system these days. And that makes the cost estimate something of great concern to us, because while there are serious estimates at this point what I think we do not know and, what no one knows, is what the development of technology will do.

We are just now seeing the FAA go with a whole full commitment to a GPS navigational system. Three or four years ago that just was not conceivable. So, we hope that this growth in tech-

nology is going to complement these efforts to determine how most cost effectively a positive train control system can be developed, and we are very encouraged by the directions in which that is moving at this time.

Passenger car safety is something you have already mentioned. And I would like to say that the absence of passenger car safety regulations is something that is of concern to us. We have investigated a number of accidents, and I must say that Amtrak has been enormously cooperatively with the Board and innovative in instituting new designs and complementing our recommendations in new train cars. But they are operating a lot of old equipment.

But our concern has been focused most recently on commuter rail. And the Gary, IN, accident which you mentioned was one that illustrated the vulnerability of commuter rail cars. We had two self-propelled trains, that collided. There was a 10-inch overlap between them between the northbound and the southbound trains. Although the collision ripped open both cars and killed seven passengers, its impact was not severe enough to cause a derailment. So, we can see that these cars, without any kind of side-post protection, are extremely vulnerable.

And it simply illustrates the fact that we have here an entire segment of our transportation industry that is basically not subject to regulation, and while we do not propose regulation for its own sake, we think that it needs immediate attention. And the attention that we gave it back in the mid-1980's, which the Administrator mentioned earlier, we found that the FRA was not responsive to our recommendations. We think this issue needs to be looked at again, and I am encouraged to see in her remarks that the FRA indeed is doing that.

Finally, the grade-crossing issue, which is the largest killer, is both a highway and a rail concern. It is certainly something that needs the continued effort on all our parts, and we are planning a study to commence this fall on grade-crossing safety and we are enormously encouraged by both pieces of legislation which have been introduced, Senator Danforth's legislation and also the one put forward by the administration yesterday. We think that this is the kind of action and the kind of attention that this issue needs. I am particularly encouraged by the closure provisions of Secretary Peña's bill, because I truly believe the best grade crossing is one that has been closed.

We believe that in the 2 years since the last reauthorization of the Rail Safety Act much has been accomplished. There has been testimony about the statistics. But sometimes I think we pay too much attention to statistics. I was just in that lovely valley in Nebraska, and when you see a situation like that and know that two lives have been lost you realize that in that context the statistics simply do not make much difference. And so we are very concerned about how we approach these accidents. We are encouraged by what we see at the FRA, and we think that we have an excellent working relationship, and we look forward to working with the FRA for the next few years.

Thank you.

[The prepared statement of Mr. Vogt follows:]

PREPARED STATEMENT OF CARL W. VOGT

Good afternoon, Mr. Chairman. I appreciate the opportunity to appear before your panel to discuss railroad safety. Before I begin my testimony, I want to introduce Mr. Robert Lauby, chief of the Safety Board's railroad division who is with me today.

Consideration of the Rail Safety Act this year offers an opportunity to further some initiatives the Safety Board has been working on for the past several years and our testimony today will highlight some of these concerns. It is the Safety Board's hope that the Congress will, as it has done in past rail safety reauthorizations, help advance our safety agenda.

The progress made since the Rail Safety Act was last reauthorized in 1992 should also be noted. The Federal Railroad Administration (FRA) is nearing completion on several notices of proposed rulemaking (NPRMs), and work on issues like locomotive crashworthiness and railroad communication procedures continues. Many advances have been made by the FRA, and the Safety Board believes our effective working relationship has benefited rail safety. At the same time, we do believe some issues need additional attention.

POSITIVE TRAIN SEPARATION

An issue long on our "Most Wanted" list, the Safety Board is a strong advocate of advanced train control systems that will provide positive train separation and act as a safety net for human performance failures in the operation of trains. Human performance, and its impact on safety, is of utmost concern in all modes of transportation. An employee who is inattentive, whether impaired, distracted, bored or fatigued, is more likely to find him or herself involved in an accident sooner or later. The railroad workplace is not exempt from these conclusions.

About 70 to 80 percent of the railroad accidents investigated by the Safety Board can be attributed to human error, and we believe that advanced electronic systems can reduce the incidence of human performance train operations accidents by overriding the engineer's actions to prevent train collisions.

The urgency of this issue has been highlighted over and over in Safety Board investigations. The railroad accidents that took place in Sugar Valley, Georgia; Corona, California; Knox, Indiana; and Ledger, Montana, could have all been prevented if a fully developed positive train separation system had been in place. And when our investigation into the Kelso, Washington, accident is complete, it could also end up being added to that list. Five operating crew members lost their lives in the Kelso head-on collision between Burlington Northern and Union Pacific freight trains last Fall.

Up until December 1993, the Safety Board was discouraged with the pace at which the railroad industry was developing such a system. There have been some important developments since that time that will be discussed in detail by others at today's hearing, and we need not repeat those here. Rather, we want to applaud the serious discussions underway on the Association of American Railroad's advanced train control system (ATCS) project. The joint project announced by Union Pacific and the Burlington Northern Railroads to install an advanced train control system on 750 miles of track in the Northwest is also an important step forward.

The Safety Board is very encouraged with these developments and is anxious to see the actual system in operation. We urge support for these positive train separation initiatives.

PASSENGER CAR SAFETY

Since the Chase, Maryland, accident in 1987, the Safety Board has investigated numerous accidents in which passenger cars received substantial damage, either from leaving the track and colliding with other derailed equipment, or sideswiping equipment on adjacent tracks. People were either injured or killed in these accidents when the passenger car was encroached by other cars, or from the interior equipment or luggage becoming dislodged or broken.

Currently, there are no comprehensive railroad passenger car safety standards in the United States. While the FRA does have some regulations covering crashposts and certain safety appliances, passenger cars are unregulated for the most part.

Amtrak has done a good job ensuring that the passenger cars that it buys and operates provide a safe environment for its passengers, and we continue to work together to address a variety of equipment related safety issues.

One example of how Amtrak's specifications result in a safer car is its requirement for a dual braking system on its passenger cars. A dual braking system uses both disc and tread brakes on each axle. The simultaneous use of disc and tread

brakes distributes the heat of braking between the brake disc and wheel, thereby almost eliminating the occurrence of overheated wheels. Overheated wheels from dragging brakes can lead to catastrophic failure of the wheel and a derailment.

But Amtrak is not the only operator of passenger equipment in the United States. Sometimes operators adopt the Amtrak passenger car specifications and standards, but in most cases, the operators purchase new equipment using their own technical specification.

One accident the Safety Board has investigated during the past year that illustrates the need for railroad passenger car safety standards. This accident occurred on January 18, 1993 in Gary, Indiana when two self-propelled commuter cars collided. The cars were moving toward each other on so-called "gantlet" track when they struck corner to corner. The overlap between the two cars was about 10 inches. The collision resulted in the sides of the two passenger cars being ripped away for one third of the length of each car. Seven people, all sitting in the front area of the colliding cars, were killed. As severe and as tragic as this accident was, the collision did not generate sufficient force to derail either train. The FRA-mandated collision post was fully exposed but left undamaged by the collision. The Safety Board believes that the car body should have done a better job protecting the passengers.

Safety Board staff talked to carbuilders to determine how difficult it would be to strengthen this area of the car and better protect the passengers. One carbuilder indicated that it would be relatively easy to strengthen the corner post area of passenger cars to provide better protection for the passengers. The company, however, was not willing to voluntarily strengthen this part of the carbody unless all carbuilders were required by regulation to incorporate the same safety feature. Providing this additional safety feature voluntarily would have made the carbuilder uncompetitive with other carbuilders.

The Safety Board will nonetheless continue to pursue passenger car safety standards as a vital element needed to ensure passenger safety on all our Nation's passenger trains.

TRACK STANDARDS

The Safety Board has been on record as supporting improved track safety standards for many years. Some of our concerns regarding track safety standards were addressed in FRA workshops held last year. The Safety Board is waiting to see the proposed regulations and will comment when these proposed rules are available. In reviewing these new standards, we will be looking for improvement in several areas including continuous welded rail, track inspection standards, and new technology.

Federal standards governing the installation and maintenance of continuous welded rail once existed in the track safety standards. In 1982, these requirements, although hardly comprehensive, were eliminated from the track safety standards despite the Safety Board's objections.

Since 1982, the Safety Board has investigated several major accidents involving the very issues that caused us to object to the elimination of continuous welded rail standards in the first place—namely the problem of continuous welded rail buckling. Let me take a moment to share just two examples.

On May 18, 1986, 14 of the 23 passenger cars of a Norfolk and Western Railway Company passenger excursion train powered by a steam locomotive derailed near Suffolk, Virginia. Of the approximately 1,000 train passengers, 177 were injured; 19 required hospitalization.

The Safety Board determined that the probable causes of the accident were the failure of the Norfolk & Western Railway Company to adequately train its Maintenance-of-Way department employees in the inspection and repair of continuous welded rail, and the failure of the Maintenance-of-Way department management to monitor the implementation of the Norfolk & Western's maintenance-of-way practices by its employees.

On April 23, 1990, another track related accident occurred. Eastbound Amtrak passenger train No. 6, the California Zephyr, derailed at Batavia, Iowa, while operating on the Burlington Northern Railroad. One passenger received serious injuries and 10 crewmembers and 75 passengers received minor injuries. The estimated damage was almost \$1.85 million.

The National Transportation Safety Board determined that the probable cause of the accident was improper rail installation during cold weather operations resulting from:

- ineffective training programs,
- inadequate supervisory oversight and quality control measures, and
- an ineffective data collection system.

Also causal to the accident was the failure of Burlington Northern procedures to require that crews readjust or distress continuous welded rail after the track had been disturbed, which resulted in a track buckle under Amtrak train No. 6.

After these and other accidents, safety recommendations were issued to identify and correct problems associated with the installation and maintenance of continuous welded rail. The Safety Board also specifically addressed the importance of the relation between the neutral temperature of installed continuous welded rail and its ability to absorb the dynamic forces of passing trains. The Safety Board firmly believes that the FRA should develop comprehensive rules to ensure proper temperature control procedures for installing and maintaining continuous welded rail.

The Safety Board addressed another important track related issue in the Superior, Wisconsin accident report. About 2:50 a.m. on June 30, 1992, Burlington Northern Freight Train No. 01-142-130 derailed as it approached a bridge over the Nemadji River in the Town of Superior, Wisconsin. The derailment and subsequent hazardous materials release resulted from a preexisting detail fracture inside the rail that broke under the load of the train.

In its investigation, the Safety Board found that severe shelling of the rail had probably masked the defect and prevented its detection by an ultrasonic testing vehicle. The Safety Board also found that there was no guidance in the track safety standards to direct the track inspector as to what action to take when severely shelled rail was encountered. In fact, shelling had been removed from the track safety standards in 1982 and is no longer considered an FRA defect.

The Safety Board believes shelling should be addressed in the revised track safety standards, and we have issued safety recommendations to the FRA to develop standards that provide defined limits of allowable rail surface conditions such as shelling, and to require remedial action for rails with surface conditions that exceed defined limits.

GRADE CROSSING SAFETY

Grade crossing safety has been addressed by the Safety Board for many years. With more than 180,000 locations where trains and highway traffic cross paths in the United States, accidents can be expected and our work to improve safety and increase public awareness of grade crossing dangers is an on-going effort.

Preliminary FRA statistics show there were 4,827 accidents/incidents at grade crossings in 1993, with 625 fatalities and 1,792 injuries. This is significantly less than the early 1970s average of more than 12,000 accidents/incidents with 1,200 fatalities. In the past five years, however, the number of fatalities has not decreased as much as the number of injuries, with fatalities falling from 689 in 1988 to 625 in 1993. These statistics graphically demonstrate the need for grade crossing safety enhancements.

One accident under investigation that demonstrates grade crossing risks involved a collision between an Amtrak passenger train and a tractor specialty trailer carrying an electrical transformer. As a result of the 1993 collision, 64 train occupants and the truck driver were transported to five area hospitals; seven train occupants and the truck driver were admitted for treatment. The truck stopped on the tracks to raise the height of the transformer and after becoming stuck, the grade crossing gates and lights activated. The Amtrak locomotive crashed into the side of the specialty truck and the transformer at approximately 75 miles per hour.

Improvements must be incorporated at grade crossings, some of which could include engineering improvements, enforcement of traffic laws at crossings and public education about crossing safety. In this vein, the Safety Board notes with interest the recent introduction of the Railroad Grade Crossing Safety Act of 1994 by Senator Danforth. This legislation's provisions aimed at reducing grade crossing fatalities and increasing public awareness information through Operation Lifesaver, Inc. are noteworthy and mirror many of the Safety Board activities in these areas.

These are just some of the safety issues that we see and we look forward to continuing to work with the Congress, the FRA, and industry in fostering rail safety.

That concludes my prepared remarks, and I would be pleased to respond to any questions you may have.

Senator EXON. Chairman Vogt, thank you very, very much. I am very pleased to hear you make specific reference to GPS. Early on, I was one of those who helped unpick or get the Pentagon to go along with GPS because I thought it had remarkable potential in the nonmilitary sector, and that has come to pass. I do not know what the July 3 report which we ordered will say, but I suspect

that we, from what I can tell, are looking possibly at some combination of transponders on the track with a rail-based system backed up in conjunction with global positioning systems.

With what you envision with regard to positive train separation, rail connected or GPS or both, we are not going to prevent all accidents. I suspect that maybe at least the first part or maybe the second part of this accident might not have happened had we had positive train separation, but I do not know.

From what you envision as coming down the line and think might be possible from a technological standpoint, just for the sake of discussion, would that system have prevented this accident in toto or partially?

Mr. VOGT. Well, I think it is very likely it may have prevented it entirely, because the original train moved through a signal which should have caused it to slow down to a restricted speed of 20 miles an hour with a stopping distance limit of one-half the line of sight. But this is preliminary and we do not know the cause of the accident. We are still investigating.

Senator EXON. Sure.

Mr. VOGT. But it would appear that had that been done, there would have been a good chance that this accident would have been avoided.

Senator EXON. In other words—

Mr. VOGT [continuing]. That had that been done automatically.

Senator EXON [continuing]. The signals would have gone up and down from several sources to the engineers that something is amiss ahead; you had better apply your brakes.

Mr. VOGT. That is correct.

Senator EXON. That would have prevented the first accident from happening. I suspect, though, when the third train came down the tracks—how many seconds did you say it was?

Mr. VOGT. Well, there was not much time there, and it is unlikely—and, again, I hesitate to speculate, but at least preliminarily, it would appear that they would not have had a time to stop from the time that they were aware of the accident. But that, again, is very preliminary.

Senator EXON. I did not realize—when I read about it in the paper, I assumed maybe it was minutes, but it was a matter of seconds.

Mr. VOGT. As best we can tell; that is correct.

Senator EXON. There is not any system that is going to be completely foolproof. But as you say, you believe if GPS works the way you think it might work, this accident would have been averted because before the first event, the signal would have been sent and we would not have this series of crashes.

Mr. VOGT. That is generally correct; yes, sir. There are no panaceas. We do not expect this to be a cure-all. We hope that there may be some application to grade crossings. It is just hard to know what this technology might hold for us.

Senator EXON. I see we have another vote on. Senator Hutchison, do you have a question, and then I will come back with some other questions. Go ahead.

Senator HUTCHISON. Well, first of all, I want to welcome this Texan to our committee. We are really proud of what he is doing.

I would like to ask you, because I have been where you are, what is the working relationship, how would you characterize it now, between FRA and NTSB?

Mr. VOGT. We think it is very constructive. Our staffs are in constant communication with one another. We know them, they know us. There is an open flow of information. As you know, in this business, Senator, we are not running any popularity contests, and we need to have an arm's-length relationship. But we also need to have a very professional working relationship, and that is what we shoot for and that is what I think we have.

The Administrator has been very helpful and I think she has brought a lot of energy to bear on the problems. She and I have a very good working relationship and communicate well with one another. So, I am very pleased with the nature of the relationship at this time.

Senator HUTCHISON. Do you—I am sure you look at the first priority recommendations that you make, and then, of course, the secondary, more long-term ones. Do you feel that FRA is moving in the priority areas to the extent that you think is where the priorities should be?

Mr. VOGT. Yes, we think so. And particularly in the last few months on the issue of positive train control. The FRA has done a very effective job in bringing the industry together to focus on this subject, and AAR has responded and established its own initiatives. So, as of right now, I would say that they are moving in the right direction on most of the issues that we hold on a priority status. That is not to say that there are not some that we do not have our disagreements on, but I think the relationship is really quite good at this point.

Senator HUTCHISON. Are you recommending that the S. 2127, Senator Danforth's bill, be put in the reauthorization, the safety reauthorization?

Mr. VOGT. Well, I am not sure exactly how that would work, Senator, in terms of whether it would become an integral part of the reauthorization. We have just seen the administration's bill. We are very favorably inclined toward both of these initiatives, so we do not have any objection to that at all, and we think it is a very positive step. I am not sure, technically, how that would fit into the authorization.

Senator HUTCHISON. But you do support both bills.

Mr. VOGT. Yes, we do,

Senator HUTCHISON. They are similar, I assume.

Mr. VOGT. Yes.

Senator HUTCHISON. I have not seen the administration's bill. Well, let me just ask you one last question. Since Operation Life-saver started with a really volunteer effort between the National Transportation Safety Board and the National Safety Council, are you staying with that or are you involved at all, or has that evolved, then, over to FRA?

Mr. VOGT. No, we are very much involved in that. In fact, I am speaking on one of their programs next month. It is, I think, a great success story. It is not the full answer, but it certainly is effectively dealing with important aspects of rail crossing safety. And

I think they are doing a very good job, and they have our full support and participation.

Senator HUTCHISON. Good. Well, I encourage you to continue because I have a sentimental feeling about it. I think it is one of the things that we have done for very low cost that really has made a difference.

Mr. VOGT. Yes, and I just regret I forget my pin today. I try to wear it whenever I get with railroad folks.

Senator HUTCHISON. I have a few of those myself. Thank you very much.

Senator EXON. Thank you, Senator Hutchison.

I should have known from listening to you that you are from Texas, but I was glad to get that confirmed, Mr. Vogt. I just wish to mention to both of you Texans that with the new, big 12-inch football, you are not going to have that little monopoly down there in that State of Texas. We are invading Texas.

Mr. VOGT. We hope it is your monopoly that is in jeopardy here. [Laughter.]

Senator HUTCHISON. We welcome the inclusion of Nebraska with our conference. We think that is going to be swell.

Senator EXON. I suppose the report is not in from the Transportation Safety Board yet, Mr. Vogt, with regard to the North Carolina accident where an Amtrak engineer was called when, as I understand it, he went by where some material had switched over and slipped on a train. Can you give us any preliminary information on that?

Mr. VOGT. Yes, I can. And, again, we are in the middle of the investigation so it is preliminary. I participated personally in the investigation. What apparently happened was that as the Amtrak train was going southbound past on a parallel track with a train that had flatbed cars with trailers affixed on those cars on a parallel track. One of the trailers came loose. Both trains were still moving, they were on about a 3-degree curve, and it seems that the trailer came loose at about the time that the Amtrak engine was approaching it. The trailer was filled with a soft material—kitty litter—which apparently shifted as it began to break loose. It was hit by the engine. The southbound train derailed and one of the crew members died.

Senator EXON. Once again, I guess that likely would be an accident which could not have been averted by positive train separation.

Mr. VOGT. Positive train separation, it would appear, would not have impacted that accident.

Senator EXON. What I am trying to bring out is that there are all kinds of reasons for train accidents, of which grade crossings are the most common, and there is no perfect situation. There is no way known today where the crew could have been aware of the loose equipment, other than visual inspection; is that right?

Mr. VOGT. That would appear to be the case. We do not know fully what the background of the trailer's loading and transport, and what might have been done to prevent its coming loose, if anything.

Senator EXON. Have accidents of that nature happened previously, to your knowledge?

Mr. VOGT. I do not believe so. Bob.

Mr. LAUBY. There have certainly been accidents involving inter-modal cars where trailers have come loose and left the car, and occasionally there are collisions, but for a trailer to come off a car at the exact moment that an Amtrak passenger train was just passing, that is not very common at all. A lot of it is just plain bad luck.

Senator EXON. One last question, then I must go vote and I will not tie you up any longer, Mr. Vogt. You may be excused after this. Briefly, what is your opinion, as a safety expert, regarding the 8-hours-on-and-8-hours-off proposition, with regard to crews and their sleep time? How important a factor do you think this is with regard to a further decrease in train accidents?

Mr. VOGT. You realize, Senator, that if I fully answer that question I might not get out of the room. [Laughter.]

The issue of fatigue is certainly one of the most important issues in all modes of transportation today. And this issue is something that needs serious review, and we think it is getting it. We have taken the position in the past that we believe the FRA should have the rulemaking authority to interpret and issue rules that have to do with work and rest cycles. I realize that that is very controversial and that this issue is a longstanding one, but we certainly think the whole question of work cycles and fatigue in general is one that needs to be reexamined, and we are encouraging that kind of reexamination.

Senator EXON. Thank you very much, Mr. Vogt, and with that I emphasize again it is always a good experience for us to have you here. Thank you for the good work that you and your Board does, and you are excused.

Mr. VOGT. Thank you, Mr. Chairman.

Senator EXON. There may be additional questions for the record. We hope that you will respond.

Mr. VOGT. Thank you. We will.

Senator EXON. We stand adjourned subject to the call of the Chair, and when we return we will hear from Mr. Harper and Mr. McLaughlin.

[A brief recess was taken.]

Senator EXON. The subcommittee please will come to order once again with my apologies again to Mr. Harper and Mr. McLaughlin. We have had one of those days. It is just beginning. We have another vote scheduled in 12 minutes, and that means I have about 20 minutes.

But thank you for being here, gentlemen. Your statements have been included in the record, as I indicated earlier. Let us start with you, Mr. Harper, and then we will see what time we have left for questions, and probably some additional ones for the record. Mr. Harper.

STATEMENT OF EDWIN L. HARPER, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ASSOCIATION OF AMERICAN RAILROADS

Mr. HARPER. Thank you very much, Senator. America's railroad industry supports the proposal of the Department of Transportation to reauthorize for a 4-year period safety efforts contained in the Federal Railroad Safety Act. A straightforward reauthorization

bill is justified by the high levels of safety being reached by employees of America's railroads.

For the period 1981 to 1993, the frequency rate of train accidents per million train miles has been almost cut in one-half. The number of train accidents has declined by more than 50 percent. Also down by more than one-half are the number of train derailments. Indeed, the years 1992 and 1993 were two of the safest years in railroad history, and I think that well illustrates the success of the work of the Federal Railway Administration, the employees in the railroad industry, as well as the work of this committee over the years in its oversight of railroad safety.

While the rail industry has made very consequential improvements in safety, we recognize, as do you, that the trend line is not improving in so dramatic a fashion as in earlier years. In order for our safety record 10 years from now to show similar improvement as it has since 1981, we believe that regulatory reform is in order, similar reform as was achieved in the economic arena by the passage of the Staggers Act.

Specifically, we believe that DOT and FRA should follow the principles established by President Clinton. In a September 1993 Executive order, the President directed each executive agency to switch from command and control rules to the use of performance standards. America's railroads—we believe very strongly that the industry must rely more fully on performance standards to advance our safety agenda.

Let me now address an issue that this committee has asked me to comment upon, highway-rail grade-crossing safety. As you know, one-half of all fatalities reported to FRA are associated with grade-crossing accidents. When combined with accidents involving trespassers, fully 9 out of 10 fatalities fall under the grade-crossing and trespasser categories. This you can see from the chart I have brought with me, which is remarkably similar to that presented by Administrator Molitoris of the FRA.

Unlike fatalities arising from derailments or train accidents, these tragic deaths for the most part are not directly responsive to railroad actions. Progress has been made largely through a Government-industry partnership that has seen grade-crossing accidents and fatalities plunge by some 60 percent since the early 1970's. This success has been accomplished primarily under the Federal Section 130 Program and public educational efforts of the Operation Lifesaver Program.

The Federal Highway Administration estimates that these two programs have saved more than 7,200 fatalities and 31,000 serious injuries since 1974. While annual accidents at grade crossings reached an all-time low in 1993, grade-crossing fatalities increased, so a special rail industry task force developed a 12-point plan of action that is provided in detail as an attachment to my written testimony. I ask that it be included in its entirety into the hearing record as well.

Senator EXON. Without objection, it is so ordered.

Mr. HARPER. Many of the components of Senator Danforth's proposed legislation, S. 2127, are included in our 12-point program. The rail industry supports S. 2127. Also, the Department of Transportation released its own Grade Crossing Safety Action Program

on June 13 at a press conference. We similarly welcome DOT's interest and dedication on this vital safety issue. I am confident that with continued cooperation among the Congress, DOT, and the rail industry, legislation can be enacted in 1994 that will significantly reduce accidents and casualties involving grade crossings and trespassers.

Finally, allow me to express the appreciation of the railroad industry to you, Chairman Exon, and to Senator Danforth for your leadership, foresight, and commitment to improving grade-crossing safety. Both you and Senator Danforth have been honored with Operation Lifesaver's Congressional Appreciation Award, which we certainly appreciate ourselves. I would be glad to respond to any questions you may have.

[The prepared statement of Mr. Harper follows:]

PREPARED STATEMENT OF EDWIN L. HARPER

Mr. Chairman and members of the Subcommittee, the Association of American Railroads (AAR) appreciates the opportunity to testify on railroad safety and the reauthorization of the Federal Railroad Safety Act of 1970 (FRSA).

AAR is a trade association whose member railroads account for approximately 75 percent of the line haul mileage, employ 89 percent of the workers, and produce approximately 91 percent of the freight revenues of all railroads in the United States.

A four-year reauthorization is justified and needed.

AAR is pleased that the Secretary of Transportation has proposed that Congress reauthorize railroad safety efforts under the Federal Railroad Safety Act of 1970 (FRSA) for a four-year period. Moreover, the Department of Transportation is not seeking greatly expanded enforcement powers or duties.

AAR supports DOT's proposal in substantial part. Importantly to AAR's members, a straightforward reauthorization bill recognizes the high levels of safety being reached by employees of the Nation's railroads. "Safety First" is not a short-lived slogan in the railroad industry; it is a dictate.

The four-year reauthorization also recognizes that the Federal Railroad Administration (FRA) now has a very substantial workload currently before it. In the last eight years, Congress has mandated 13 statutorily mandated rulemakings, according to FRA's count. The Secretary's transmittal letter noted that FRA is involved in over 40 safety rulemaking projects and reports to Congress.

The reauthorization recognizes the commitment of FRA to get its work done in a timely, competent, and professional manner. FRA has a number of very important rulemakings before it. A four-year reauthorization is appropriate in light of the agency's heavy agenda and the need to promulgate rules which will permit important improvements in safety.

The railroad safety record supports a straight reauthorization.

As evidenced by its four-year reauthorization proposal, DOT has recognized the improvement in the railroad industry's safety record. That recognition is warranted, and it is gratifying to report to you on the favorable trends in railroad safety since 1981, as shown by the preliminary statistics on train accidents just released by FRA for the year 1993.

For the period 1981 to 1993, the frequency rate of train accidents per million train miles has been almost cut in half—the rate is down 48 percent. The number of train accidents has declined 52 percent. The rate of derailments is also down 52 percent, while the number of derailments has dropped 56 percent.

Regrettably—and following a year which had been the safest in railroad history—the number of fatalities because of train accidents in 1993 rose to 124 from 35 in 1992. The tragic passenger train accident on the barge-damaged bridge at Mobile, Alabama and the Gary, Indiana commuter train accident accounted for 44 percent of the 1993 fatalities. Injuries in 1993 were down 16 percent from 1981, but excluding these two accidents, injuries declined almost 60 percent.

Despite the Alabama and Indiana tragedies, 1993 had the second best safety rate in history.

It is not any coincidence that these achievements have come since Congress passed the Staggers Rail Act of 1980 which ordered significant reform of the government's economic regulation of railroads. The performance of railroads since enactment of this new economic charter demonstrates the benefits that flow from greater reliance on market forces than on government command-and-control economic regu-

lation to achieve national benefits. In the decade through 1992, the U.S. freight railroad industry has made capital expenditures in excess of \$35 billion for roadway, structures and equipment.

The safety regulation process needs reform.

While, as I have noted, railroads continue to make improvements in safety, we must recognize that the trend line in more recent years, while positive, is not improving in so dramatic a fashion as in the past.

When AAR is given the opportunity to testify on FRSA reauthorization a decade or so from now, all of us want the rail industry's safety improvement to be as good as it has been since the Staggers Act. AAR is confident that the next ten-year record can show good improvements in safety. But the railroad industry's goal is to do better than good. However, achieving that goal will require another quantum leap in the business of safety like that witnessed since the passage of the Staggers Act.

Just as the Staggers Act's reformation of economic regulation ushered in a new safety era, so also regulatory reform of safety regulation can provide the grounding for another period of superior safety performance by railroads.

Until time and experience demonstrate the contrary, important and needed reform of safety regulation can be achieved without any special amendments to FRSA as a part of this reauthorization. Rather, what is needed is a commitment by the DOT and FRA to follow the principles established by President Clinton in his September 30, 1993 Executive Order No. 12866 on the regulatory system. President Clinton directed each agency to switch from command-and-control rules, detailing the principles that must be followed to avoid "imposing unacceptable or unreasonable costs on society." One important principle involved the use of performance standards. President Clinton said (section 1(b)(8)):

Each agency shall identify and assess alternative forms of regulation and shall, to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt.

Unless DOT and FRA are committed to meaningful regulatory reform and its achievement by the specification of performance objectives, AAR is concerned that improvement in safety performance will not be as significant as it could otherwise be. Over a year ago, Secretary Pen a pledged that FRA will "explore ways of converting design and maintenance requirements to more flexible performance measures." Action must follow this commitment.

I recognize that AAR itself must also demonstrate that commitment. AAR establishes standards and recommended practices for equipment which must be met as a condition to unrestricted use in interchange service. Admittedly, AAR can and must do a better job of establishing those requirements in terms of performance standards.

For both AAR and the government, there are lessons to be learned from the adverse effects resulting from command-and-control regulation. Some examples offer an insight. For the first example, I refer you to testimony of the National Transportation Safety Board (NTSB) at the November 19, 1993 hearing on track safety before a subcommittee of the House Committee on Energy and Commerce. The NTSB witness observed the following:

[R]ailroad companies are sometimes penalized for doing a better job of inspection because all defects found must be corrected per the regulations. This type of situation presents a disincentive for railroads to use ultrasonic testing [for rail flaw detection] to its full capability. The FRA must be sensitive to these issues and act in a responsible manner to support improvements in the quality of track inspection through technology—possibly by adopting performance based standards.

The lesson to be learned is that rigid command-and-control regulation will impede use of technological advances which could improve safety.

A second example demonstrating the need to regulate by performance standards is the development of railroad wheels. Some background may be helpful. Generally, trains are stopped by applying brake shoes to the wheel tread. This puts into the tread a high rate of thermal energy. To avoid metal deformation and high stress, resulting in fracture, the tread must expand uniformly. Until the 1950s, iron wheels were mostly used. But the freight business was changing (increased loads carried at higher speeds), and iron wheels were unable effectively to manage the stresses and were increasingly subject to fractures.

The iron wheels soon were replaced by steel wheels. Over time, with intensive study, experiment, and development, steel wheels evolved from straight plate configuration to curved plate wheels. Today, the heat-treated, curved plate design has proved superior in service.

This advance in the science of wheel technology has been very significant. There has been a two-thirds reduction since 1981 in the number of accidents caused by wheel defects.

The railroad industry's technological development of railroad wheels was not led by the government. To the contrary, the government has in place a command-and-control rule that prevents the industry from taking full advantage of the benefits which could be obtained from the industry's evolution to heat-treated, curved plate wheels.

The FRA command-and-control rule prohibits a railroad from continuing a car in service if the wheel on the car shows four inches of discoloration (reddish-brown) on the plate area. This is known as the "discoloration rule." The problem is that whether or not discoloration may indicate dangerous stress on some types of wheels, it is irrelevant on the new heat-treated, curved plate wheels.

The discoloration rule is a \$189 million problem for the railroads. That number is the net present cost of removing discolored heat-treated, curved plate wheels from the current fleet. AAR and its members have sought relief from the discoloration rule for a number of years. Over a year ago, AAR formally petitioned the FRA to make the rule inapplicable to heat-treated curved plate railroad freight car wheels. FRA has asked for more information on the matter, and the industry has supplied it. The matter is pending.

It takes a great deal of time and money to get government regulations changed. We have high hopes that FRA will act soon on the discoloration rule, because it continues to be made clear from the performance of the wheels in actual railroad operations that the discoloration rule does not perform any safety function whatsoever when applied to heat-treated curved plate wheels.

Rules on rail flaw detection and wheel discoloration are good examples of the kind of rules to avoid as we look for safety gains over the next decade. Optimal technological development depends on the ability to test different approaches to solve a problem and to expect appropriate returns when solutions are found. Reform of the regulatory process with emphasis on establishment of performance standards accommodate this need.

Performance standards directly relate to what is happening in the real world. Unlike command-and-control direction which can lock in a set technology that does not produce commensurate benefits, regulation by performance standards encourages innovation and produces genuine safety benefits.

Both AAR and FRA have a lot of work ahead of them to achieve reform of safety regulation so that Congress a decade from now will witness a safety trend as encouraging as that seen since the Staggers Act.

DOT's request for additional authority is too broad.

Although its four-year reauthorization proposal does not seek extensive new enforcement powers, DOT does want new authority in two areas. First, DOT seeks the power to waive requirements of the Hours of Service Act to allow joint proposals for pilot projects from management and labor to go forward.

Second, DOT wants a so-called "technical" amendment to give it authority to prohibit a person from performing safety-sensitive service based on the person's violation of a Federal safety law. (This "technical" amendment excludes one safety law, the Hazardous Materials Transportation Act, because other DOT modal administrations do not have such enforcement authority as to HMTA).

Although unconvinced that it is needed, AAR does not object to granting DOT waiver power under the Hours of Service Act. In its section-by-section analysis, DOT says that "the rigid standards of the Act * * * do not properly address safety issues related to work/sleep cycles." DOT, however, does not provide any facts to show that the Act needs amendment to prohibit actual work schedules which are unsafe. Facts should drive decisions about the adequacy of the Hours of Service Act, not speculation about the safety implications of hypothetical work schedules. As discussed below, industry and labor representatives have formed the Work/Rest Review Task Force in order to establish the necessary facts. Moreover, AAR does not agree that the Act properly interpreted would block appropriate pilot projects.

AAR does agree, and strongly so, that DOT correctly makes its waiver authority contingent on a joint request from management and labor. There is little that can be accomplished in this area absent cooperative efforts between management and labor. Such cooperation is a key ingredient in safety performance. Indeed, there is already underway a Work/Rest Review Task Force made up of representatives from AAR, the Brotherhood of Locomotive Engineers, the United Transportation Union and five Class 1 railroads looking at train crew work schedules. The Task Force has briefed FRA's Administrator Jolene Molitoris on its activities.

But, while not objecting to the proposed Hours of Service Act waiver authority, AAR does oppose DOT's "technical" amendment to broaden its power to disqualify

individuals from performing service. This amendment is substantive, not technical. Take, for example, the Hours of Service Act just discussed. AAR is not aware of any course of conduct involving this Act that requires adding disqualification to the arsenal of available remedies. Disqualification is a drastic measure and a strong showing should be made that recourse to it is absolutely necessary.

DOT has not given any reasons why its existing authority under the safety laws is not adequate. Surely such reasons are called for when FRA already has authority to impose substantial civil penalties, as is the case with the Hours of Service Act.¹ On the facts known, AAR opposes expansion of FRA's disqualification power. Congress should demand solid evidence of need before it authorizes an agency—regardless of how well-intentioned or competent the agency may be—to order an individual off his or her job.

Public Highway-Rail Grade Crossing Safety.

In addition to FRSA reauthorization issues, AAR has been asked to comment on another important area of transportation safety, that of highway-rail grade crossing safety.

It is important to understand that one-half of all fatalities reported to FRA are associated with grade crossing accidents and incidents. When combined with other accidents involving trespassers, fully nine out of ten 1993 fatalities fall under the grade crossing and trespasser categories. Unfortunately, these categories present safety concerns that are not as directly responsive to railroad actions as are most other areas concerning train accidents. As Senator Danforth so accurately pointed out in recently introducing the Railroad Grade Crossing Safety Act of 1994 (S. 2127),

"The main cause of these [grade crossing] deaths is not inadequate signage.

Over 50 percent of collisions between trains and motor vehicles occur at crossings with active warning gates, lights, and bells. Most of the time, motorists simply fail to recognize that to race a train is to race death."

On the other hand, grade crossing safety is an area where there has been a successful partnership among government, the railroad industry, and other transportation safety interests for many years. This partnership has resulted in reductions in annual public grade crossing accidents and fatalities of approximately 60 percent since the early 1970's. These successes have been accomplished primarily as a result of the crossing engineering improvements carried out under the federal Section 130 Program, and the driver education/public information and traffic law enforcement efforts of the Operation Lifesaver Program. In fact, the Federal Highway Administration estimates that the Section 130 Program and Operation Lifesaver efforts have prevented over 7,200 fatalities and 31,000 serious injuries since 1974.

While these statistics certainly reflect accomplishments to be enthusiastically applauded, the railroads have recently become concerned about the prospects for continuing this record of safety success. During 1993, annual accidents at grade crossings achieved an all-time low of 4,287, but crossing fatalities increased by 6 percent, to 614 from 579. In response to this concern, earlier this year the railroads put together a special task force, under the leadership of AAR, to develop a plan of action to ensure continued grade crossing safety improvement. The special grade crossing safety task force developed a 12-point plan that AAR shared with the FRA as industry input to the DOT's multi-modal effort to formulate a grade crossing safety action plan.

I will simply mention a few highlights of the railroad industry's grade crossing safety proposal here today, but I have included the full detailed proposal with my written testimony (Attachment A). I would ask that the "Railroad Industry Grade Crossing Policy Agenda for the 1990's" be included in its entirety in the hearing record.

A few of the highlights of the railroads' proposal include:

1. The federal government should finance a multi-year national grade crossing safety education and public awareness campaign to be conducted by Operation Lifesaver, Inc.

Since a major threat to motorists stems from lack of awareness of the grave dangers of their behavior, government should take responsibility for a multi-year public awareness campaign designed to dramatically illustrate the life-or-death consequences of motorists' behavior at grade crossings. Federal funding grants have traditionally been made by federal government agencies, such as the National Highway Traffic Safety Administration (NHTSA), to states and non-governmental enti-

¹ 45 U.S.C. §64a provides: "Any person * * * [that violates a provision of the Hours of Service Act] shall be liable for a civil penalty * * * in an amount not less than \$500 nor more than \$10,000 * * * [and up to \$20,000 for certain gross violations] except that a penalty may be assessed against an individual only for a willful violation."

ties to carry out innovative highway safety programs, including driver education and public awareness.

This expanded national Operation Lifesaver campaign must garner for the organization and its messages the same routine recognition and acceptance that MADD enjoys for its attack on drunk driving. The need to "Look, Listen * * * and Live" at grade crossings must be as familiar to the general public as "Friends Don't Let Friends Drive Drunk."

2. The federal government should eliminate any confusion that exists over who is responsible for determining the need for appropriate grade crossing warning devices.

Significant confusion exists concerning the responsibilities for providing improvements to highway-rail grade crossings. This is particularly significant with respect to highway traffic warning devices at crossings. Several levels of government and private companies, including railroads, can be involved in various elements of the grade crossing warning device selection process, but only a single entity must be ultimately responsible for the final decision concerning the need for appropriate warning devices at grade crossings. Federal law should be enacted which specifically and uniformly identifies crossing safety responsibilities for all involved parties.

Railroad responsibilities related to grade crossings should be limited to providing states with needed train traffic and certain other crossing information, crossing safety warning device operation (if installation and maintenance is performed by railroad personnel), train operations, and crossing sight distance on railroad right-of-way.

3. The federal government should establish a national mandate and a uniform process for closing unnecessary public grade crossings.

Rail safety officials have long advocated the closure of a large proportion of the public highway-rail grade crossings in the United States. Many grade crossings are unnecessarily redundant, serving no significant transportation mobility or access purpose, while continuing to constitute a rail and highway safety hazard.

The closure of grade crossings, rather than appropriately being an objective transportation safety decision, today frequently evolves into a local emotional/political confrontation.

In order to facilitate the closure of redundant and unnecessary public highway-rail grade crossings, the railroads support the establishment by Congress of a federal crossing closure mandate and a nationally uniform crossing closure process. Such a process should require state transportation agencies to identify and evaluate candidate crossings for closure, utilizing uniform crossing closure criteria established by the U.S. Secretary of Transportation, and to develop and implement a statewide crossing closure plan. Active participation in this National Grade Crossing Closure Program should be required of all states.

The DOT should also develop guidelines which states would be required to follow in deciding whether to permit the opening or creation of any new grade crossings.

4. Penalties for violating grade crossing safety laws should be severe and the laws should be strictly enforced. Congress should require a minimum \$500 fine for motorists who violate crossing traffic laws and establish fines of up to \$2,500 for people who vandalize grade crossing warning devices and trespass on railroad rights-of-way.

The violation of traffic laws relating to highway-rail grade crossings is the single most significant factor in grade crossing accidents. Every year approximately 50 percent of the accidents at public grade crossings occur at crossings equipped with automatic train activated warning devices. In order to deter more effectively the violation of grade crossing traffic laws by motorists, increased fines for such violations must be imposed. The federal government should require states to establish a minimum fine of \$500 for such violations.

Vandalism of grade crossing warning devices is a significant and continuing problem with potentially catastrophic consequences, such as passenger train derailment, and grade crossing accidents involving school buses or hazardous material vehicles.

The problem of trespassers on private railroad property is also a continuing and increasing safety concern. During 1992, there were 533 trespasser fatalities. Many of these tragic accidents involved risktakers on railroad trestles and tunnels, and even a resurgence of, in this case "yuppie," hoboes.

Grade crossing warning device vandalism and trespassing on railroad property, due to their serious safety consequences, should be made federal civil crimes with fines of up to \$2,500.

America's railroads believe these proposals and the remaining elements of our Grade Crossing Policy Agenda have the potential for a dramatic breakthrough and reinvigoration of the national campaign to eliminate needless and senseless tragedy at America's highway-rail grade crossings.

I earlier mentioned Senator Danforth's introduction of S. 2127, the Railroad Grade Crossing Safety Act of 1994. Many of the components of Mr. Danforth's legislation are included in the railroad grade crossing package I just described. The AAR supports S. 2127 and urges that its substance be included and passed as part of the rail safety reauthorization bill.

To complete my statement on grade crossing safety, I would like to express my appreciation, and that of the railroad industry, to Chairman Exon and Senator Danforth. We are indeed fortunate for their leadership, foresight, and commitment to improving grade crossing safety and the welfare of the travelling public and railroad employees.

I might point out for the record that both of these distinguished Senators have been honored as recipients of Operation Lifesaver's Congressional Appreciation Award. Senator Exon received this prestigious honor last year, and Senator Danforth was so recognized just last month. I personally know of no members of Congress more deserving of this honor than Senators Exon and Danforth.

AAR opposes extension and expansion of railroad "user fees."

There is one final matter. AAR wants to stress its opposition to the Administration's fiscal year 1995 budget proposal for extension and expansion of railroad safety user fees. These fees were imposed by the Omnibus Budget Reconciliation Act of 1990 and are scheduled to expire on September 30, 1995. The budget proposal not only would extend the current fees through fiscal year 1999, but also expand the base of the fees to include costs incurred by the Safety Thaw Division of the Office of General Counsel and by the Office of Safety in enforcing the Hours of Service Act. Railroad fees would grow from \$37 million in fiscal year 1994 to \$43.5 million in fiscal 1995. Projections for future years, of course, show further increases.

Although it is not a part of DOT's railroad safety reauthorization package, the matter is one that is within the jurisdiction of this committee. Because of the importance of the matter, I take this opportunity to continue to express the industry's opposition. These are not "user" fees because railroads do not receive any benefit or service from their levy. Pure and simple, they are taxes.

Congress in the past has responded in at least a limited way to the industry's concern about these taxes. You recognized the issue of competitive equity among the different transportation modes by refusing to extend the scope of FRA activities covered. You also required DOT to report on the costs of federal safety activities for other modes and to submit recommendations for legislative change to correct modal differences.

DOT's response to congress's direction has been less than adequate. Its reports have been late and in effect demonstrate that this fee concept is ill-conceived. The concept is not based on careful examination of comparable fees for competing modes and the competitive impact of the fees. Nevertheless, the Administration's budget advocates more of the same.

The Committee should reject the Administration's approach. These taxes should not be extended, and certainly not expanded. At the very least, extension should be conditioned on DOT's complying with Congress's 1990 direction to provide a comprehensive modal impact analysis and on giving the taxpayers, the railroads, the chance to comment on the analysis.

AAR and its members greatly appreciate this opportunity to give our views on the reauthorization of railroad safety and grade crossing safety proposals.

ATTACHMENT A—RAILROAD INDUSTRY GRADE CROSSING POLICY AGENDA FOR THE 1990'S

(AAR BOARD OF DIRECTORS—ADOPTED MARCH 1, 1994)

1. Driver Education/Public Information (Operation Lifesaver)

Issue

Operation Lifesaver (OL) is an active, continuing public education program designed to reduce the number of accidents, deaths, and injuries at highway-rail crossings. It is sponsored cooperatively by federal, state, and local government agencies, highway safety organizations, and the nation's railroads. The program attempts to increase public awareness of the highway-rail crossing environment, and improve driver behavior. In conjunction with its education program, Operation Lifesaver emphasizes the enforcement of existing traffic laws, and engineering improvements, including installation and upgrading of crossing warning devices.

Annually, the National Operation Lifesaver Program currently receives \$300,000 from the Federal Highway Administration in general support, and approximately \$100,000-\$150,000 from the Federal Railroad Administration in project specific grants.

While the term "Operation Lifesaver" is registered with the U.S. Patent Office as a trademark belonging to Operation Lifesaver, Inc. (OLI), the non-profit organization which conducts the National Operation Lifesaver Program, adequate name recognition and public association of OL and grade crossing safety has been limited to those areas where OL efforts have been most concentrated.

A vastly intensified national advertising and public awareness campaign is needed to persuade the general public to recognize, and respond appropriately to, the inherent danger of highway-rail crossings.

Railroad Industry Policy

Since a major threat to motorists stems from lack of awareness of the grave dangers of their behavior, government should take responsibility for a multi-year public awareness campaign designed to dramatically illustrate the life-or-death consequences of motorists' behavior at grade crossings. Federal funding grants have traditionally been made by the National Highway Traffic Safety Administration (NHTSA) to states and non-governmental entities to carry out innovative highway safety programs, including driver education and public awareness.

A campaign for children might include a nationwide contest to create and name a grade crossing safety/Operation Lifesaver mascot or symbol, similar to the "Smokey the Bear" character.

The railroad industry, in association with Operation Lifesaver, is in the process of developing a dramatic and hard-hitting television public service announcement campaign along the lines of South Carolina's high-recognition campaign against drunk driving and speeding. To supplement this effort, government could use a currently popular film, such as the train-bus crash scene in "The Fugitive", to shockingly demonstrate the vulnerability of motor vehicles when involved in collisions with trains.

However designed, Operation Lifesaver's expanded national campaign must garner for the organization and its messages the same routine recognition and acceptance that MADD enjoys for its attack on drunk driving. The need to "Look, Listen * * * and Live" at grade crossings must be as familiar as "Friends Don't Let Friends Drive Drunk".

The national grade crossing safety/Operation Lifesaver campaign should be conducted by Operation Lifesaver, Inc. Additionally, in order to assist OLI in the management of the campaign and the increased activity level following the effort, annual FHWA funding to OLI should be increased to \$500,000.

2. Trespassers on Railroad Right-of-Way

Issue

The problem of trespassers on private railroad property is a continuing and increasing safety concern. While annual fatalities at highway-rail grade crossings, although unacceptably high, are being reduced almost every year, annual fatalities from trespassing are on the increase. During 1992, there were 533 trespassing fatalities.

Trespassing on private railroad property takes many forms. These include children shortcutting across railroad tracks on their way to school or play areas, curiosity seekers in railroad yards, hunters walking along rural rail lines, risktakers on railroad trestles and in tunnels, and even a resurgence of, in this case "yuppie" hoboes.

Due in large part to the variety of types or circumstances of railroad trespassing, reasonable and effective solutions have been extremely difficult to achieve. Fencing of railroad right-of-way, for example, has been extremely expensive and totally ineffective. Where attempted, especially in urban areas, fences have been cut or knocked down almost as quickly as they can be erected.

Railroad Industry Policy

The federal government and the railroads should develop and launch a substantial nationwide multi-media public education campaign to inform the public of the tremendous danger and illegality of trespassing on private railroad property, including isolated rural rail lines. The campaign should be multi-faceted in its approach, including various types of media and presentation techniques, and focused on the numerous types of trespassers (e.g., youth, adolescents, hunters, and even "yuppie" hoboes).

In conjunction with this Trespasser Campaign, in an attempt to further deter railroad trespassing, federal fines should be adopted for anyone convicted of trespassing on private railroad property. These penalties could be comparable to those recommended for vandalism of grade crossing warning devices (i.e., a fine of up to \$2,500).

3. Grade Crossing Improvement Responsibilities

Issue

Significant confusion exists concerning the responsibilities for providing improvements to highway-rail grade crossings. This is particularly significant with respect to highway traffic warning devices at crossings. Areas of responsibility include such activities as: a) Collection of crossing and related traffic information; b) Determination of crossing safety adequacy; c) Selection of crossing safety warning devices; and d) Installation of such warning devices.

Several levels of government and private companies, including railroads, can be involved in various elements of the grade crossing warning device selection process.

Due to the confusion created by varying, duplicative, and even conflicting approaches to the grade crossing safety improvement process, inefficient and occasionally ineffective crossing safety decisions result, wasting time and vital resources, and, ultimately, putting the motoring public, railroad employees, and rail passengers at risk.

Railroad Industry Policy

Federal law should be enacted which specifically and uniformly identifies crossing safety responsibilities for all involved parties.

Railroad responsibilities related to grade crossings should be limited to providing states with needed train traffic and certain other crossing information, crossing safety warning device operation (if installation and maintenance is performed by railroad personnel), train operations, and crossing sight distance on railroad right-of-way.

Additionally, railroads, appropriate rail labor organizations, and the Federal Railroad Administration should conduct employee education programs which specifically emphasize the safety importance, not only to railroad personnel, but to motorists and the general public of strict adherence to railroad operating rules by individual train crew members. Practices such as stopping trains so as to cause extended blocking of grade crossings, leaving trains stopped in a position to cause unnecessary activation of crossing warning devices, and train speed and whistle violations should absolutely be avoided.

4. Elimination of Redundant Highway-Rail Grade Crossings*Issue*

Rail safety officials have long advocated the closure of a large proportion of the public highway-rail grade crossings in the U.S. Many grade crossings are unnecessarily redundant, serving no significant transportation mobility or access purpose while continuing to constitute a rail and highway safety hazard.

State officials and railroads generally support the closure of unnecessary grade crossings, but are often frustrated in their crossing closure efforts by the emotional opposition of a few local citizens. The closure of grade crossings, rather than appropriately being an objective transportation safety decision, frequently evolves into an emotional/political confrontation.

Politics and mere driving convenience will continue to dominate debates over crossing closures until final decisions are ultimately vested with appropriate transportation safety authorities.

Railroad Industry Policy

In order to facilitate the closure of redundant and unnecessary public highway-rail grade crossings, the railroad industry supports the establishment of a federal crossing closure mandate and a nationally uniform crossing closure process. Such a process should require state transportation agencies to identify and evaluate candidate crossings for closure, utilizing uniform crossing closure criteria established by the U.S. Secretary of Transportation, and to develop and implement a statewide crossing closure plan. Active participation in this National Grade Crossing Closure Program should be required of all states.

Additionally, the authority to close crossings should be established within the U.S. Department of Transportation (DOT) for use in instances where a state refuses to develop or effectively implement its crossing closure plan.

The DOT should also develop guidelines which states would be required to follow in deciding whether to permit the opening or creation of any new highway-rail grade crossings, recreational crossings (e.g., snowmobile trails and bicycle paths), and pedestrian crossings.

5. Separation of Highway-Rail Grade Crossings*Issue*

Highway-rail grade crossings can be eliminated by constructing grade separation structures. These structures generally are either highway overpasses or underpasses, usually highway bridges over rail lines.

The 45,000 mile Interstate Highway System has been constructed over the past 40 years with no at-grade highway-rail crossings, and the accident fatality rate on the Interstate is less than half the rate recorded for other highway systems.

There is no similar requirement to eliminate grade crossings on the proposed 159,000 mile National Highway System (NHS). The NHS will serve as the backbone of this country's entire network of highways, roads, and streets. While the NHS represents only about four percent of the 3.9 million miles of public roads, it is expected to carry over 40 percent of the Nation's highway traffic. In other words, these are and will increasingly be the most heavily travelled highways in the United States, and they are estimated to contain approximately 4,500 highway-rail grade crossings. Congress must approve the NHS by September 30, 1995.

Railroad Industry Policy

Federal highway design standards should require the elimination of all highway-rail grade crossings on the National Highway System as a long term goal. Any NHS project which includes a grade crossing within the project termini must provide for its elimination, and no NHS route on a new alignment can include a grade crossing.

Additionally, federal criteria should be developed and adopted which would require the grade separation of certain crossings in conjunction with non-NHS federal-aid projects. Such criteria would primarily be based on highway and/or train traffic levels. Traffic above a certain defined level would require grade crossing separation.

Finally, federal guidelines should be adopted which would require the elimination, either through separation or closure, of all grade crossings on high speed passenger rail lines.

6. State/Local Locomotive Whistle Laws

Issue

Numerous localities across the country have adopted laws and ordinances prohibiting the sounding of locomotive whistles as a warning to motorists approaching highway-rail grade crossings. The circumstances of these whistle bans vary to some degree, but most apply to grade crossings with active warning devices during nighttime hours.

A Federal Railroad Administration investigation of the safety consequences of local whistle bans in Florida comparing the grade crossing accident records of the Florida East Coast Railroad (subject to whistle bans) and the CSX Railroad (not subject to whistle bans) revealed dramatically higher accident rates on the FEC compared to that experienced by the CSX. This revelation was particularly startling due to the fact that the two railroads operated on parallel rail lines, with similar highway traffic levels, and essentially identical grade crossing characteristics. Subsequent to this study, the FRA preempted the local whistle bans applicable to the FEC in Florida.

Conrail, which unilaterally resumed the sounding of locomotive whistles at all grade crossings in 1991, despite local whistle bans in 30 communities, experienced a 200-300 percent reduction in accidents at the affected crossings.

Railroad Industry Policy

The railroad industry supports a nationwide preempt ion of all local or state laws restricting the sounding of locomotive whistles at highway-rail grade crossings.

Locomotive whistle/horn research may ultimately develop audible alerting systems which cause reduced community disruption than present locomotive whistles, but the safety consequences of continuing to permit existing whistle ban laws in the interim is unacceptable.

7. Crossing Warning Device Problem Alert System

Issue

Despite regular and thorough grade crossing warning device testing, inspection, and maintenance practices conducted by railroad personnel, the industry has occasionally experienced problems in receiving timely and accurate notification when warning device operational problems occur.

In 1982, the Texas legislature created the Texas 1-800 Number Rail-Highway Crossing Notification Program to help address this problem. Texas has installed signs at public crossings encouraging the public to call the 1-800 telephone number in the event of a crossing warning device problem. The calls are received by the Texas State Police, which in turn alert the appropriate railroad personnel. Operation of this system annually costs Texas approximately \$100,000 for general operations, telephone service, and 1-800 sign replacement.

The railroad experience with the Texas 1-800 System has been generally positive. Although occasional "crank" calls are received and the public's perception of a warning device problem may be inaccurate, the system continues to provide valuable and

timely information concerning warning device problems to appropriate railroad maintenance personnel.

Railroad Industry Policy

The railroad industry supports the creation of a national grade crossing warning device problem alert system. While other effective systems could be developed, an expansion of the Texas 1800 System would be supported by the railroad industry.

As is the case in Texas, public funding would be required to initiate and continue to operate the national alert system. Due to the national scope of this system, federal funds should be utilized. It would also be appropriate for such funds to be derived from highway user revenues, due to the fact that the primary beneficiaries of crossing warning devices are motorists.

8. Grade Crossing Traffic Law Violations

Issue

The violation of traffic laws relating to highway-rail grade crossings is the single most significant factor in grade crossing accidents. As an example, every year approximately 50 percent of the accidents at public grade crossings occur at crossings equipped with automatic train activated warning devices. Additionally, several accidents annually occur at grade crossings at which traditional highway "stop" signs have been installed.

Railroad Industry Policy

In order to more effectively deter the violation of grade crossing traffic laws by motorists, increased fines for such violations must be imposed. The federal government should require states to establish a minimum fine of \$500 for the violation of state or local traffic laws and ordinances related to highway-rail grade crossings.

9. Police and Judicial Enforcement of Grade Crossing Traffic Laws

Issue

The establishment of significant fines to deter motorists from violating grade crossing traffic laws is an important step in improving crossing safety, but those laws must be vigorously enforced and the fines uniformly imposed in order for them to be effective.

Operation Lifesaver sponsored programs, such as "Trooper on a Train", have been somewhat helpful in increasing the awareness of the law enforcement community to grade crossing safety issues.

More clearly needs to be done in this difficult area.

Railroad Industry Policy

States should be encouraged, through highway safety bonus awards, to develop and carry out innovation pilot programs designed to increase enforcement of grade crossing traffic laws by state and local police and the courts.

10. Section 130 Grade Crossing Improvement Program Funding

Issue

The historic Highway Safety Act of 1973 created and funded a national highway safety program specifically dedicated to enhanced safety at highway-rail crossings by providing for needed engineering and warning device improvements (Section 130 Program). Over \$2.9 billion in highway user revenues has been made available to the states for crossing improvements under the Section 130 Program. In federal fiscal year 1994, approximately \$150 million was apportioned to carry out this important program.

Without funding dedicated or earmarked for the Section 130 Program crossing needs would have rarely successfully competed with more traditional highway needs, such as highway capacity improvements and highway maintenance. Historically, highway safety, and particularly crossing safety, has fared very poorly in the competition for scarce financial resources. In fact, this problem was the primary reason a separate crossing improvement program was established in 1973. During the 40 years between 1934 and 1973 less than \$95 million in federal funds was spent installing signs and warning systems at public crossings, and crossing accidents and casualties continued to increase.

As a direct result of the federal funding for highway-rail crossing improvements, annual crossing accident and fatality rates have been slashed by over 50 percent. In fact, the Federal Highway Administration estimates that the Section 130 Program has prevented over 7,200 fatalities and 31,000 injuries since 1974, and has an overall benefit-cost ratio of approximately 1.3.

Despite the proven success of the Section 130 Program, many states assign an extremely low priority to crossing improvement projects. Through the end of 1993,

over \$270 million of Section 130 Program funds remained unobligated by the states, and an additional \$187 million had been transferred to other federal-aid highway program categories.

Railroad Industry Policy

Earmarked funding for the Section 130 Program should be continued, and the annual funding level should be increased to at least \$185 million. The "Rail-Highway Crossing Study" completed by the U.S. Department of Transportation in 1989 found that:

"For warning systems, an estimated annual investment of \$185 million in improvements is necessary to maintain current overall safety performance * * *

An initiative to cost effectively reduce current accident levels would require another \$30 million annually."

In order to increase state priority for Section 130 Program projects and increase crossing improvement spending, the authority to transfer Section 130 Program funds to other federal-aid highway program categories should be eliminated and Section 130 Program obligations should no longer be included within the national limitation on federal-aid highway program obligations.

11. Vandalism of Grade Crossing Warning Devices

Issue

Vandalism of grade crossing warning devices is a significant and continuing problem. Such vandalism manifests itself in a variety of ways, including damaged (often shot out) flashing light signals, and broken crossing gate arms or gate arms which have been tied or otherwise secured in an upright position, preventing their proper deployment.

The potentially catastrophic nature of grade crossing accidents, especially those which could result in the derailment of passenger trains, or those which involve school buses, or train or motor vehicle carried hazardous materials or explosives, demands the most severe penalty for grade crossing warning device vandalism.

Railroad Industry Policy

Vandalism of highway-rail grade crossing warning devices should be made a federal civil crime. Conviction of such a violation should subject the offender to a fine of up to \$2,500. Repeat offenders should be subjected to progressively more severe penalties.

12. Highway-Rail Crossing Research Needs

Issue

There are several elements of the overall grade crossing safety formula which continue to require additional research.

For example, the widespread violation of grade crossing traffic laws clearly indicates a need to investigate the effectiveness of existing traffic control devices, particularly the standard "crossbuck" sign. The development and testing of alternative low-cost automatic warning systems would give states much needed flexibility, especially with respect to low traffic volume grade crossings. Additional research also seems to be needed on systems designed to provide supplemental warnings to motorists, such as locomotive reflectorization, train lighting, and crossing whistles or horns.

There are a number of sources of both funding and technical expertise that could be pursued to support grade crossing research. For example, none of the \$471.6 million available in 1993 for research through the Technology Reinvestment Project being administered by the Advanced Research Projects Agency (ARPA) has been considered for highway-rail crossing related research. Moreover, many of the technical skills that reside in the defense industry, such as command, control, and communications technology, and human factors engineering, are appropriate for many of the grade crossing research needs. Another potential source of funding and expertise is through a cooperative research and development agreement (CRADA) with one of the national research laboratories, such as Argonne, Sandia, or Oak Ridge.

Railroad Industry Policy

The railroad industry supports a variety of highway-rail grade crossing research initiatives (see Attachment I).

The railroad industry's role in such research should be that of an active partner and sponsor with the appropriate government agencies. Such arrangements will help ensure that the broad-based railroad knowledge and technical expertise essential to such research will be provided. These partnerships are also necessary to achieve acceptance of the research results by both the railroad industry and those government agencies ultimately responsible for implementation.

ATTACHMENT I—HIGHWAY-RAIL CROSSING RESEARCH NEEDS

1. *Highway Driver Response:* Investigate driver detection and understanding of, and responses to, grade crossing warning systems. This has been the subject of numerous studies, but the findings to date are incomplete and inconclusive. Questions that require better answers include those related to how well drivers detect various active and passive crossing warning signs and signals, how well they recognize and understand what the signs and signals mean, and how well they understand what they are supposed to do (e.g., slow down, yield, stop, maintain speed but look for approaching trains). Results from such investigations can provide the basis for performance specifications for warning systems and for improvements in driver education and awareness programs.

2. *Low-Cost Active Warning Devices:* Develop and evaluate low-cost active warning devices for low-density grade crossings. Such research could begin with the development of the functional requirements and performance specifications for such devices. These could be the basis for a request for proposal to manufacturers to develop prototypes. Manufacturers' prototypes could then be tested to determine their durability and effectiveness. Testing of effectiveness would require carefully controlled studies to determine whether the prototypes significantly influenced long-term driver behavior.

3. *Improved Passive Warning Devices:* Develop and evaluate improved passive warning devices for grade crossings. The approach could be the same as for the low-cost active devices. Such devices would incorporate the findings of highway driver response research.

4. *Off-Track Train Detection Systems:* Active crossing warning systems are now activated by track circuits that detect approaching trains. New and improved technology argue for the investigation of train detection devices for activation of grade crossing warning systems that do not rely on track circuits.

5. *Advanced Crossing Systems:* Test and evaluate prototype crossing systems. One example is prototypes patterned after the ABB system now in use in Sweden. Features of this system include four-quadrant gates, and a crossing occupancy warning system that alerts the locomotive crew if a highway vehicle is on the tracks after the gates have been lowered. Other examples include "friendly barrier" systems. One such system uses a spring-loaded barrier designed to safely absorb highway vehicle impacts. The barrier is stored under the highway and is raised when the warning system is activated. Another design has a spring-loaded net gate barrier similar to those used to catch jets landing on aircraft carriers. [FRA has indicated an interest in having AAR test prototypes of the X-2000 and friendly barrier systems at TTC.

6. *Train Conspicuity:* FRA is currently evaluating how long reflectorized materials on freight cars and locomotives can last in the railroad environment before they become so dirty that their reflectorization properties are significantly diminished. The results are now expected around the end of 1995. However, no definitive research has been conducted to determine whether such reflectorization would significantly reduce grade crossing accidents. Conrail has already begun a program to install reflectorized material on its new and rebuilt locomotives and freight cars, and Burlington Northern is installing it on its locomotives.

7. *Locomotive Conspicuity:* FRA is investigating techniques to increase locomotive visibility, such as extra headlights, higher illumination headlights, ditch lights, strobe lights, lights to illuminate the front of the locomotive. Preliminary findings are now expected to be published this summer. Further research should be conducted to determine whether any of these schemes significantly influence driver behavior and reduce crossing accidents.

8. *Horn Systems:* FRA with Union Pacific is investigating horn systems mounted at grade crossings facing highway traffic and activated by approaching trains at two crossings in Nebraska. The results are scheduled to be available sometime mid-year. If these preliminary tests show positive results, such systems should be installed at other test locations to determine their long-term effect on driver behavior at various crossing configurations.

Senator EXON. Mr. Harper, thank you very much, and to you and Mr. McLaughlin again I apologize for the delay. It has been a long day, and you have been very patient. Mr. McLaughlin.

STATEMENT OF RONALD P. McLAUGHLIN, CHAIRMAN, RAIL LABOR EXECUTIVES' ASSOCIATION; ACCOMPANIED BY LAWRENCE M. MANN, ATTORNEY FOR RLEA

Mr. McLAUGHLIN. Thank you very much, and no problem for the delay.

My name is Ronald McLaughlin. I am president of the Brotherhood of Locomotive Engineers. Today, I am testifying on behalf of the Rail Labor Executive Association. Accompanying me is Lawrence Mann, attorney for RLEA in this matter.

The constituent unions represented by RLEA are contained in my full statement. The following represents RLEA's comprehensive rail safety proposals.

The Hours of Service Act needs to be amended in five areas. All supervisory trained dispatchers should be covered under the Hours of Service Act.

Proposal No. 1, individuals who transport crews to and from duty assignments should be covered under the Hours of Service Act. All operating employees covered by the Hours of Service Act should be entitled to not less than 8 hours' calling time, advance calling time. After 6 consecutive days on duty, an employee should be entitled to at least 1 day off. All employees should be at their off-duty point prior to the expiration of their hours of service.

Proposal No. 2 is wherever there is a gap in coverage of a particular subject matter, or working condition in the FRA regulations, or where FRA regulations are not as effective as OSHA regulations, OSHA should specifically apply to the railroad employees.

Proposal No. 3, noise abatement regulations should be issued to reduce the noise hazards to railroad employees from the work environment.

Proposal No. 4, such standards should be at least as effective to reduce noise as contained in OSHA regulations. Under no conditions should a car required to be placarded under the hazardous materials regulations be located at the rear end of a train.

Proposal No. 5, regulations should be promulgated regarding the proper makeup and placement of cars in trains.

Proposal No. 6, no employee should be required to respond to a hazardous spill derailment until there is a properly authorized, qualified determination on the nature of the material and the appropriate methods of protection needed to be taken by such crews.

Proposal No. 7, standards should be issued for maintenance of way equipment and machinery.

Proposal No. 8, standards should be issued covering railroad bridge construction, maintenance, and inspection.

Proposal No. 9, standards should be issued covering passenger train safety.

Proposal No. 10, all provisions in FRA regulations which delegate certain rulemaking functions to the rail industry should be repealed.

Proposal No. 11, notwithstanding any other law to the contrary, wherever a State or local jurisdiction conducts without probable cause an alcohol or drug test of a rail employee after an accident at a grade crossing, the employee tested should be entitled to monetary damages from the entity that required the test to be performed.

Proposal No. 12, the Federal Railroad Administration should establish negotiated rulemaking committees in an attempt to reach consensus on proposed rules or regulations.

Proposal No. 13, there should be a working radio on all manned moving equipment including but not limited to locomotives and maintenance-of-way equipment.

Proposal No. 14, the use of remote control locomotives should be prohibited.

Proposal No. 15, it should be a violation of the Federal Railroad Safety Act to remove a shop tag from a car or locomotive until the appropriate repairs have been completed.

Proposal No. 16, there should be a flagman/watchman at all locations where an employee is working on or at a track or roadbed, or in the alternative, such employee should have absolute right to prevent any train movement within one-half mile of that work site.

Proposal No. 17, a railroad should be required to renew each request for a waiver which has been granted and still in existence at the end of 3 years from the date of issuance.

Now, that concludes the RLEA statement, Senator, but the locomotive engineers has a special concern it brings before this body. Since September of 1993, up to and including the Amtrak Silver Meteor accident, which occurred on May 16, 1994, eight locomotive engineers have suffered agonizing deaths as a result of train accidents and collisions. Over the course of time, many more have lost their lives in accidents that could have been prevented.

The question is, or seems to be, what cost is the railroad industry willing or able to bear to reduce the likelihood of life-threatening accidents? Using the five most recent accidents as an example of what goes wrong and could be cured or prevented, we have come to the following conclusions.

The Amtrak accident on September 22, 1993, which claimed 3 engineers' lives and 43 others on the train, assuming that initial findings are confirmed, the bridge which was damaged could have been electronically or manually protected, giving advance warning to trains of the need to stop and determine if it was safe to proceed. The bridge was not protected because the railroad industry, with the assent of a former FRA Administrator, determined that it cost too much to provide such protection.

The Burlington Northern-Union Pacific head-on collision which occurred on November 11, 1993, claimed the lives of two engineers, two conductors, and one trainman. A similar accident, the Burlington Northern coal trains that collided in North Platte, NE, last Wednesday, claimed the lives of another engineer and trainman. Assuming that one of the three things—signals that were obscured by fog, signal malfunctions or crew fatigue—were the actual cause for the collisions, what could have been done to prevent the accidents?

The engine could have been equipped with cab signals or automatic train separation devices. Cab signals are a technology which have been in use, in fact, and the Union Pacific was equipped with cab signals. The Burlington Northern had apparently proceeded beyond its authorized territory and was not so equipped. If the signal was indeed set against the BN trains, cab signals would have is-

sued an alerting signal permitting the train to stop before it exceeded the control point.

Automatic train stop separation has been a technology that has been under study for some time. The industry has resisted implementation due to cost. This technology would afford even greater protection than cab signals.

What if simple fatigue was the cause? We have not done enough to address such concerns. Although a labor-management task force effort is underway, more can and must be done to improve the conditions under which operating employees labor.

Our engineers have virtually no control over many factors which adversely affect their ability to perform their assigned duties in a safe and efficient manner. Train lineup and crew management information are absolutely horrendous on some railroads. Runs in some cases are too long and too irregular to permit quality rest periods, lodging and restaurant facilities are not sufficient to promote rest, and last but not least, engineers are not even permitted to decline or defer work assignments when they themselves know they are tired.

The railroad industry has contributed to these problems by failing to maintain a sufficient reserve supply of qualified locomotive engineers and trainmen. The lives of three engineers, three conductors, and a trainman were the price paid for not addressing one or all of these problems.

The Illinois Central head-on collision which occurred on February 26 and claimed the life of a locomotive engineer, although the actual cause of the accident is somewhat obscure, we know that one of the trains departed its terminal when an opposing train was authorized to proceed in an opposing direction to the same terminal. This is the third head-on collision on this railroad in less than 4 years. Whether the accident is attributed to miscommunication, conflicting train orders, fatigue, or whatever combination of the circumstances, we need to take a closer look at the train operations on this railroad.

The Amtrak accident on May 16 which claimed the life of one engineer and critically injured another, assuming as before that the initial findings of a shift in load are confirmed, was this the first shifted container on flatcar? Absolutely not.

The record, if researched, will show there are many similar occurrences which has or is being done to ensure that equipment of this type is secure, so it cannot shift en route, or that shifted equipment is detected before such accidents occur. The answer to such problems would seem to be relatively simple and low cost, yet these problems are not being addressed. One more engineer's life was lost needlessly in our estimation.

So, where do we go from here? Perhaps the answer is stricter regulatory enforcement, perhaps more regulation. I doubt that the railroad industry is anxious to have more regulation, yet left to their own devices, they seem to opt for the most low-cost, rather than the most effective solutions. We no longer find this approach to be acceptable. If the industry is not willing to identify the factors which lead to accidents and death, somebody else must, and if the industry balks at spending the moneys necessary to prevent the re-

currence of similar incidents, they certainly will assume the liability.

What about the Federal Government and its agencies, which are being funded through the reauthorizing process, when accidents with similar causes continue to occur? We wonder how effective these efforts really are.

We are willing and interested in working with industry and the Government to address these issues. Our record speaks for itself. We have repeatedly warned this Government and the industry of many unsafe practices and conditions, yet study after study and endless committees lead only to deferred action.

Now is the time to act. If we are going to reauthorize safety initiatives in the railroad industry, let us make it count for something. The lives of these employees should not be lost for nothing. We know the problems. Let us fix them rather than study them.

Thank you.

[The prepared statement of Mr. McLaughlin follows:]

PREPARED STATEMENT OF RONALD P. McLAUGHLIN

My name is Ronald P. McLaughlin. I am the president of the Brotherhood of Locomotive Engineers. Today I am testifying on behalf of the Railway Labor Executives' Association (RLEA). Accompanying me is Lawrence M. Mann, attorney for RLEA in this matter. The constituent unions represented by RLEA are as follows: American Train Dispatchers Department, International Brotherhood of Locomotive Engineers; Brotherhood of Maintenance of Way Employees; Brotherhood of Railroad Signalmen; Brotherhood of Locomotive Engineers; Hotel Employees & Restaurant Employees International Union; International Brotherhood of Boilermakers & Blacksmiths; International Brotherhood of Electrical Workers; International Brotherhood of Firemen & Oilers; International Longshoremen's Association; and Sheet Metal Workers' International Association.

Throughout the years RLEA has brought to your attention many rail safety problems needing legislative action. Today, we are also presenting a number of issues which need your assistance in resolving. While our list of issues may seem long to the railroads, each one warrants legislative action, because we have been unable to resolve them.

THE HOURS OF SERVICE ACT NEEDS TO BE AMENDED

All Supervisory Train Dispatchers Should Be Covered Under The Hours Of Service Act

There is a need to clarify whether chief and assistant train dispatchers, night chief train dispatchers, and similar supervisory personnel are covered within the term "train dispatcher" in section 3(a) of the Hours of Service Act (45 U.S.C. § 63(a)). These employees give directions pertaining to train movements and clearly are in safety sensitive positions. FRA does not consider some of these employees to be covered by the Act. Therefore, we urge Congress to adopt language which unquestionably covers these employees.

Individuals Who Transport Crews To And From Duty Assignments Should Be Covered Under The Hours Of Service Act

In the 1991 hearings before this Subcommittee we brought to your attention the serious problem of individuals who transport railroad crews to and from duty assignment being fatigued and unsafe to drive. These persons should be brought under the protections of the Hours of Service Act.

Increasing use of carriers licensed to transport railroad employees in interstate commerce and increasing numbers of accidents due to unrested drivers show the need for preventive procedures to ensure motor carrier safety. There are numerous safety complaints alleging driver fatigue. According to the Utah Office of Motor Carriers, and many others, registered complaints have ranged from drivers showing gross signs of fatigue (such as vehicles swerving) to driver admissions that they worked excessive hours.

Last month the Nebraska Public Service Commission issued an order prohibiting any driver who transports railroad crews from operating the vehicle for more than

12 hours within any 24 hour period. In addition, the Commission required minimum liability insurance coverage. We support the efforts of the states, but believe a nationwide standard should be imposed. A specific example of the problem may be informative. A driver of railroad crews was killed at Mt. Pleasant, Texas on May 4, 1994 when his vehicle went out of control. After having received 4 hours rest before being called again for duty, he had driven approximately 16 hours prior to the accident.

Too many railroad crews are being transported in similar unsafe conditions. To ignore this problem denies employees their right to be provided with a safe place to work. We believe the potential for serious injury or death of employees can be significantly reduced by covering under the Hours of Service Act all drivers hauling railroad crews.

With the enactment by Congress in 1992 of amendments to the various rail safety laws, including the Hours of Service Act, independent contractors were brought under their provisions. Therefore, we believe these drivers are already covered. However, in order to avoid unnecessary litigation, we ask that clarifying language be adopted.

All Operating Employees Covered By The Hours Of Service Act Should Be Entitled To Not Less Than 8 Hours Calling Time

Several of the most critical railroad safety issues include the maximum number of hours an employee should be permitted to work each day and each week, amount of undisturbed rest (i.e. calling time) and regular scheduling.

We presented this problem to you last Congress. Because of time restrictions we were advised that these issues would receive a more thorough analysis during this Congress. Therefore, we are updating our previous testimony on this issue.

An unresolved issue under hours of service is the amount of undisturbed rest a railroad worker is entitled. We submit that under the existing law an employee is entitled to undisturbed rest for 8 or 10 hours, depending upon how many hours the person worked before the rest period began. In the amendments to the Hours of Service Act in 1969 the legislative history addressed the issue and made it clear that the rest should be undisturbed (see e.g., Cong. Rec. p. 2932, Oct. 9, 1969). However, the practice on the railroads still is that the employee is called by phone at least 2-3 hours before he/she is required to report to duty. This obviously interrupts a person's rest. The FRA to date has not prohibited the practice, nor imposed fines against the carriers. RLEA's attorney sought an interpretation from FRA on this issue on August 17, 1988. Almost 6 years later the FRA has not answered the letter. In order to avoid costly litigation, we request that Congress clarify the point that employees are entitled to at least 8 hours uninterrupted rest, and to require the industry to give employees 8 hours notice before requiring them to work.

Railroad operating crews are typically plagued by chronic exhaustion, caused primarily by excessive hours of work coupled with inadequate rest time, and by unpredictable and irregular work schedules. For example, we can document numerous examples where employees regularly work 88 hours per week. The effect of sleep deprivation and unpredictable and irregular work/rest cycles were summarized in the National Transportation Safety Board Railroad Accident Report, Head-End Collision of Consolidated Rail Corporation Freight Trains UBT-506 And TV-61 Near Thompsettown, Pennsylvania January 14, 1988, NTSB/RAR-89/02 (1989). In the Report, it explains that workers do not remedy this hazardous condition by making up for lost sleep on their days off, nor do they "adapt" to the irregular work hours. Chronic sleep deprivation results in fatigue, frequent microsleeps or lapses (periods in which workers fall asleep for a short time then awaken spontaneously, unaware that they had been sleeping all). NTSB Report, at 37. The frequency and duration of such lapses increase as the person becomes more chronically sleep deprived. Id. Although the worker will perform his task perfectly both before and after the lapse, he is asleep during it. As a result, the worker will not respond at all to external stimuli unless they are massively sensory in nature, very unusual, or particularly meaningful. ii.

Also, workers subject to nonsystemic and unpredictable changes in their work schedules are highly susceptible to variation in alertness and consciousness that are associated with their circadian "body-dock," which is typically at its lowest ebb between roughly 1 a.m. and 7 a.m. Employees suffering from the effects of chronic sleep deprivation are more susceptible to environmental conditions which promote sleep. Extensive studies have been conducted on operating crews in which, not only single crew members, but on some occasions entire crews have fallen asleep while performing their jobs. Id.

Based upon the NTSB's analysis of the Thompsettown accident and other prior accidents it concluded:

17. The changing nature of railroad operations and competitive factors have materially increased the relative number of train crew members who must work irregular and unpredictable shifts on a long term basis.

18. Since train crew members lack the requisite training to recognize the condition, they may allow themselves to become chronically sleep-deprived and develop physiological problems that impact adversely on their performance. Conrail and the other railroads need to recognize and deal with this probability by modifying their operations to reduce shift irregularity and by instituting educational and intensified medical examination programs.—NTSB Report at 53.

Cited by the NTSB as one of the causes of the Thompsonstown accident was unpredictable work/rest cycles of the crew. NTSB Report at 54.

In testimony on several occasions by James L. Kolstad, then Chairman of the NTSB, he pointed out that fatigue of railroad workers is a major concern in accidents. On February 19, 1991, he testified:

In both the August 9 and November 7, 1990, railroad accidents in Sugar Valley, Georgia and Corona, California, work/rest cycles of railroad crew members is an issue. Crew member fatigue has been a Safety Board concern in all modes of transportation, and it has been placed on our "Most Wanted" list of safety issues. Through the Board's safety recommendation follow-up process, and discussions with railroad officials, we will continue to push for safety improvements in this area.

Hearings on Department of Transportation and Related Agencies Appropriations for 1992, Before the House Subcommittee on the Department of Transportation and Related Agencies Appropriations, Committee on Appropriations, 102nd Cong., 1st Sess. 35 (1991).

Mr. Kolstad again repeated the NTSB's concerns in testimony June 12, 1991, on Railroad Safety Programs Before the House Subcommittee on Transportation and Hazardous Materials, Committee on Energy and Commerce, 102nd Cong., 1st Sess (1991). He stated:

Human Performance is still the most important factor in any accident, in any mode of transportation. An operator who is inattentive, for whatever reason, can expect to find himself in an accident sooner or later. Too often, that inattention is caused by fatigue.

Railroad employees, especially train crews, are confronted by very unpredictable and tiring work schedules - a situation that has not changed since the beginning of railroading. The changing nature of railroad operations and competitive factors have increased the relative numbers of crew members and other in safety sensitive positions who must work irregular and unpredictable shifts—often on a long term basis.

We have found in accident after accident that workload and work/rest issues have been critical factors.—Hearings, Id. at 164)

Upon being asked by the Subcommittee Chairman, Al Swift, to prioritize the top safety issues, Mr. Kolstad replied:

Mr. KOLSTAD. I would say fatigue and hours of service problems is probably the biggest single problem. That is currently being addressed by a study in the Office of the Secretary at DOT. I know that FRA has got a study underway. But that clearly would be the most significant problem.

I might just mention, Mr. Chairman, that this is not a problem that the railroad industry experiences alone. Fatigue is a problem in all modes of transportation.

Mr. SWIFT. Is that because of the length of time people will typically have to work?

Mr. KOLSTAD. It is circadian rhythm problems; it is duty time problems; it is this business of going on duty at 3 a.m. and working until 11 on one day, taking 8 hours of rest, and then going on duty at 7 p.m. the following day and working until 4 in the afternoon, taking 8 hours, and continuing in that process. That simply cannot be sustained with any expectation that human performance is going to continue to be sharp.

Mr. SWIFT. Yet the schedules of the transportation industry, airlines, railroads, buses, kind of require those kinds of hours.

Mr. KOLSTAD. In many cases that is true. It seems to be more true in the railroad industry and in the trucking industry.—(Hearings, Id. at 171).

The NTSB's Report on the Corona, California, accident of November 7, 1990, it demonstrates the hazards in the railroad operations resulting from irregularity and unpredictability of a locomotive crew's work schedule. The Board concluded that both of the locomotive crew members had fallen asleep because of acute fatigue, partly resulting from the irregularity and unpredictability of the work schedule. (National Transportation Safety Board Railroad Accident Report, Atchison, Topeka

and Santa Fe Railway Corona, California (November 7, 1990), RAR-91 /03 at p. 45 (July 23, 1991).

For further evidence supporting the proposition that irregular work schedules have adverse safety effects, we refer you to *Biological Rhythms, Sleep, and Performance*, by Wilse B. Webb at pp. 59-87, 110-141, 175-204 (John Wiley & Sons 1982); and testimony of Dr. Charles Czeisler at the Hearings on Shift Work Scheduling and Biological Clocks Before the House Subcommittee on Investigations and Oversight of the Committee on Science and Technology, 98th Cong., 1st Sess. 176 (1983).

The FRA has undertaken only a cursory study of the issues related to a railroad worker's irregular work hours, excessive working hours, waiting times etc. See *Issues in Locomotive Crew Management and Scheduling*, U.S. Department of Transportation, Federal Railroad Administration DOT/FRA/RRP-91-01 and DOT-VNTSC-FRA-91-1 (February, 1991). Nevertheless, some of the findings are significant: (1) Two of the three focus groups involved in the study cited unpredictable working hours as the most important single cause of stress and fatigue; (2) many participants noted that sleep was often taken at times and in amounts which were inappropriate to the hours of duty which followed. Otherwise, the employee would hardly ever be able to participate in family activities; (3) In the first focus group the railroad's train scheduling system is sufficiently advanced to provide 8 hours advance notice of jobs about 90% of the time; and (4) Eight hours off duty seldom translates into more than four hours sleep because of the time required to get to a motel and eat, coupled with the fact that sleep will be interrupted by a telephone call two hours before the next job starts.

Presently the Brotherhood of Locomotive Engineers, the United Transportation Union, and the Association of American Railroads, in conjunction with FRA, are involved in a project to reach a consensus on work/rest cycles. FRA has an ongoing agreement with the Illinois Institute of Technology Research Institute to study stress and fatigue for both engineers and dispatchers. Rail labor is cooperating in this project. However, this has been in existence for several years with no real positive results to date. We believe Congressional action is necessary because voluntary actions have not been successful.

After 6 Consecutive Days On Duty, An Employee Should Be Entitled To One Day Off

Employees should be given the opportunity to have one day free from work during each seven day period. There have been a number of trains involved tragedies that have been attributed to an employees lack of rest. Rail management's nineteenth century attitude of working a person until he/she drops must be changed. Rail labor has not been able to accomplish it through other concerted efforts. We have no alternative but to seek legislation to correct the problem. Ms. Juliet Schor, a noted Harvard University economist in a speech on April 12, pointed out that America had become a nation "rich in things and money and poor in time". She recommended that the federal laws should be revised to guarantee more free time to the work force. She noted how these additional work responsibilities have resulted in Americans neglecting their families and the social and community institutions which are aimed at boosting the quality of life. While Ms. Schor was not specifically discussing the excessive work by railroad workers, everything she said applied to the men and women employed in the rail industry.

All Employees Should Be At Their Off Duty Point Prior To The Expiration Of Their Hours Of Service

Directly related to the number of hours an employee should be on duty is the question of how to treat deadhead transportation. Present law provides that deadhead transportation is not to be counted as either time on duty or time off duty. We believe that it should be counted as time on duty because this contributes greatly to the problem of irregular work hours. Being realistic, this issue cannot be collectively bargained in the U.S. Therefore, in the interests of safety, we are asking your Committee to adopt a measure to include deadhead transportation as being counted as time on duty.

WHEREVER THERE IS A GAP IN COVERAGE OF A PARTICULAR SUBJECT MATTER OR WORKING CONDITION IN THE FRA REGULATIONS, OR WHERE FRA REGULATIONS ARE NOT AS EFFECTIVE AS OSHA'S REGULATIONS, OSHA SHOULD SPECIFICALLY APPLY TO THE RAILROAD EMPLOYEES

A major problem of great concern to railway labor concerns gaps and confusion relating to OSHA coverage for working conditions that have not yet been addressed under Federal Railroad Administration regulations. In such circumstances, OSHA should apply. However, in practice this has not occurred in many instances. We brought this issue to your attention in 1991. The areas where there is no protection

for railroad workers are already well known in the industry. The need for new legislation is an outgrowth of the unique jurisdictional structure of the rail industry's occupational safety and health laws. This has created two problems within the existing system of safety regulation shared by FRA and OSHA. First, the division of oversight responsibility between the two agencies has sometimes resulted in a "gap" in coverage that occurs when a working condition could readily be addressed by an OSHA regulation, but falls outside of OSHA's specific jurisdictional responsibility, yet has not been addressed by any FRA regulations. While a shared jurisdictional structure was contemplated by the original drafters of the OSHA law, Congress did not intend that it would result in any gap in coverage. Consequently, the situation as it now stands violates the original intent of Congress and undermines the very purpose of OSHA legislation—to protect all American workers from an unsafe workplace.

Second, the shared jurisdictional structure creates confusion over which agency has authority over a particular working condition or subject matter. Such administrative confusion causes delays, a lack in enforcement, and ultimately more injuries in the workplace. These problems need to be addressed so that the rail worker may finally receive the same regulatory protection from OSHA that other American workers now receive.

In the early 70's the railroads challenged OSHA's right to enforce any of its regulations in the railroad industry. The courts unanimously rejected the railroads arguments. Nevertheless, even with the favorable court decisions and in what we believe was a political decision, the Department of Labor and DOT gave the railroads basically what they wanted anyway. In 1978, the Secretary of Labor agreed to cede part of its jurisdiction over the rail industry to the FRA. Shortly thereafter, FRA issued a policy statement that spelled out the division of authority between FRA and OSHA. The policy statement explained that:

FRA has decided to focus its resources and energies * * * on the safety of railroad operations. The term safety of railroad operations relates to the conditions and procedures necessary to achieve the safe movement of equipment over the rails. For instance, the safety of railroad operations requires that * * * proper precautions taken to assure that trackmen are not struck by train or other equipment moving over a rail are part of the safety of railroad operations. On the other hand, hazards relating to the handling of welding apparatus are non-operational concerns.

Thus, FRA by this formal policy statement considers that only workplace conditions directly related to movement by rail fall within the ambit of its authority. In a letter dated January 11, 1993 from former FRA Administrator Gil Carmichael to the Association of American Railroads, the position of FRA was clarified:

Until FRA exercises its statutory authority with respect to given conditions through promulgation of a standard or through an expression that regulation is unnecessary or would be counter productive, existing OSHA standards apply in the railroad workplace.

More recently, in pending litigation relating to bridge safety standards, the FRA further explained its position regarding the jurisdictional issue between FRA and OSHA. It acknowledged that OSHA indeed had extensive regulations applicable to the railroad industry. Still, a full and formal clarification is needed to eliminate this chronic problem of a gap in coverage.

Unfortunately, numerous situations have arisen where FRA has failed to develop the appropriate regulations for a particular working condition within its jurisdiction. At the same time, OSHA has the regulatory expertise to address these working conditions under FRA jurisdictional authority. The loser, of course, is the rail worker who must continue to work under unsafe conditions.

We will point out some examples to illustrate the problems experienced in the railroad industry.

A common one relates to the locomotive cab environment. Railway labor has been concerned about the adverse health effects from exposure to diesel fumes for many years. RLEA has submitted complaints concerning these dangerous conditions to both OSHA and FRA. OSHA refused to investigate because FRA has primary authority over protection of operating crews. FRA, however, has done virtually nothing to require locomotive crew compartments to be healthy and safe. Today, operating crews still are working with constant exposure to smoke and diesel exhaust fumes. Congress did address this issue in the 1992 safety legislation by requiring FRA to study the locomotive cab environment.

A similar problem involves sanitation on locomotives. Switch engines are not even equipped with a toilet. Locomotives used in long over the road movements are equipped, but it is rare to find one which is clean and properly maintained. Coupled with the fact that most locomotives are not air conditioned, one does not need a

vivid imagination to appreciate the engineer's plight in being exposed to diesel fumes, heat, and foul smelling toilets. But for the policy statement, OSHA would protect these workers.

Another situation representative of the gap problem is an April, 1987 tunnel fire incident outside of San Luis Obispo, California. It took several days before the fire was under control. The incident was characterized by mistakes that could have been avoided by better planning. But FRA has no regulations regarding tunnel safety and the state OSHA agency stated that since it was outside of shop areas it was not within its jurisdiction.

An accident on June 17, 1991 on the property of U.S. Reduction Company, Toledo, OH in which two Conrail workers were injured when they attempted to move a tank car containing chlorine out of the loading area also is relevant. The car was not fully disconnected from the loading equipment. As a result, chlorine backflowed into the atmosphere, spraying the conductor and injuring the engineer as he attempted to assist his fellow crew member. The conductor was hospitalized following the exposure, and is still suffering from respiratory ailments. The engineer and two U.S. Reduction Company employees were also injured.

OSHA conducted an inspection of the U.S. Reduction Co. sometime after the accident occurred, and found significant deficiencies in the company's safety program. The company was cited for numerous serious violations of the Hazardous Waste Operations and Emergency Response Standards, § 1910.120, Respiratory Protection, § 1910.134, and Personal Protective Equipment, § 1910.132. A serious citation was issued as well, for a general duty clause violation citing employee exposure to "the possibility of chemical burns, respiratory system damage and death from possible exposure to liquid or gaseous chlorine while connecting or disconnecting railroad tank cars containing liquid chlorine should a valve fail or pipe rupture."

While Conrail employees were exposed to the same hazards as U.S. Reduction employees, OSHA made a decision not to open an investigation on Conrail because of presumed lack of jurisdiction. Unfortunately, the FRA has failed to issue safety and health standards comparable to the OSHA standards cited above, leaving railroad workers without protections from serious hazards resulting from toxic chemical spills and releases such as this one. The lack of a clearer statement of jurisdictional authority and an efficient system by FRA for administering questions of jurisdictional authority results in confusion that borders on gross negligence.

In a situation dating back to August, 1987, a railway labor representative repeatedly inquired of FRA as to whether it was the proper agency to investigate a new questionable practice. It entailed leaving a car repairman using noisy equipment alone while performing repairs. The practice exposed the repairman to injury from moving equipment on the rails. Almost three years later FRA finally responded that FRA deferred to OSHA's special expertise in the area of worker protection standards in construction work. The problem still has not been affirmatively addressed by either agency.

NOISE ABATEMENT REGULATIONS SHOULD BE ISSUED TO REDUCE THE NOISE HAZARDS TO RAILROAD EMPLOYEES FROM THE WORK ENVIRONMENT. SUCH STANDARDS SHOULD BE AT LEAST AS EFFECTIVE TO REDUCE NOISE AS CONTAINED IN OSHA REGULATIONS

Another issue we presented during the last Congress was the matter of noise abatement. It is axiomatic that prolonged exposure to noise encountered in many industrial environments can produce a permanent hearing loss. This is particularly true in the rail industry, where employees are frequently subjected to noise levels exceeding 100 dba. Of course, once there has been a noise induced hearing loss, normal hearing cannot be restored. Rail labor has brought the matter of excessive noise and the correlated health and safety problems associated with excessive noise to the attention of FRA many times. Our pleas have literally fallen on deaf ears at FRA. Over prolonged periods of time, workers on operating equipment in the yards, shops and on the tracks are subjected to excessive noise which clearly has resulted in hearing impairment to many. There are thousands of claims which have been brought seeking damages for hearing loss. In 1990, for example, there were over 28,000 claims and suits pending against the railroads for hearing loss. Countless others have been resolved over the past 10 years. The current caseload is still staggering. Some carriers have initiated a hearing conservation program. But, still, this has not resulted in a nationwide program to reduce noise in the workplace and provide adequate protections for railroad workers. It is cheaper for the railroads to pay the claims than to take the necessary action to reduce the noise. Therefore, today most railroads and FRA have simply stuck their collective heads in the sand and hoped that the problem would vanish. FRA must take responsibility to assure the

safety of employees, and issue effective regulations to require the railroads to reduce the work environment noise levels.

UNDER NO CONDITIONS SHOULD A CAR REQUIRED TO BE PLACARDED UNDER THE HAZARDOUS MATERIALS REGULATIONS BE LOCATED AT THE REAR END OF ANY TRAIN

A seemingly, common sense "no brainer" is our proposal to prohibit placarded tank cars from being placed at the rear of trains. The hazard should be obvious to the industry, but in practice some carriers disregard the necessity to place a placarded car elsewhere in the train consist. Existing regulations do not cover this issue, but we understand that DOT may consider this in Docket HM 201-A. We ask Congress to at least make a policy statement requiring DOT in Docket HM 201-A correct the problem.

REGULATIONS SHOULD BE PROMULGATED REGARDING THE PROPER MAKE-UP (I.E., PLACEMENT) OF CARS IN TRAINS

Improper train make-up is one of the most under-regulated and underestimated hazards in the railroad industry today. Improper distribution of loaded and empty freight cars in trains has been the source of countless accidents, which is grossly under-reported by the nation's railroads as a cause of derailments. The only source of train make-up restrictions is the railroads themselves, and they are not mandatory. Therefore, they can be disregarded by the railroads at any time.

In a California state proceeding arising out of the Dunsmuir, California derailment in 1991, we analyzed the statistics on the Southern Pacific railroad. We are not intending to single out this particular railroad because we believe the problem exists throughout the rail industry. In 1992 we reviewed 70 accidents filed by SP under Cause Code 570 (Buffing or Slack Action Excessive). We identified 20 (29 percent) where the underlying cause was improper train make-up.

Slack action occurs when empty cars are followed by loaded cars in a train consist. As a result of the improper distribution of weight, braking the train can cause a slingshot effect between the light and heavy cars, which makes train handling exceedingly difficult and ultimately causing derailments such as the one that occurred at Dunsmuir. An earmark of improper train make-up, resulting in too much slack action, is excessive loading of tonnage in the rear of the train. In fact, excessive slack action may result whenever loaded cars are placed behind a string of empty cars or placing long cars directly behind short cars. The possibility of derailment increases greatly anytime an improperly made-up train experience brake problems or must negotiate curves, even where there is conservative brake usage.

Because there may be several factors resulting in slack action, the FRA accident reporting codes are easily manipulated to hide the many causes that contribute to the effect identified by the code, and in turn obscures the true causes of the accidents being reported. Improper train make-up, a management directive, is one such cause which contributes to countless accidents.

An example of the reporting code being used to hide improper makeup as an accident cause is Code 405, the code for a "Brake Valve Malfunction" or "Undesired Braking". Although undesired braking may result in a derailment, in many instances, it would not alone result in a derailment. Many such derailments reportedly caused by undesired braking are primarily the result of improper train make-up. Undesired braking in many cases leads to excessive slack action which, in turn, results in a derailment. Although undesired braking or excessive slack action may be cited as the cause, the true culprit, improper train make-up, is an accident waiting to happen and may be precipitated by braking, negotiating curves, or power surges. Where an improperly made-up train is involved, any brake problems may bring about excessive slack action and derailment.

Another accident code which may mask the presence of improper make-up as the true cause is Code 572, which indicates "excessive lateral drawbar force on a curve" as the cause of the accident. As with "excessive slack action," Code 572 is attributed to human error. Where the true cause is improper train make-up, the designation of this as human error is clearly inappropriate. AAR guidelines regarding curvature considerations are mirrored by Southern Pacific guidelines and specifically cite train make-up as a contributing factor in avoiding excessive lateral drawbar forces. The guidelines state that

Special care must be observed in negotiating curves in excess of two degrees—especially curves of four degrees or more—in order to avoid generating excessive lateral forces as these excessive forces can cause derailments. The lateral forces which can cause this situation come from the dynamic forces produced by run-ins of slack; by having long cars coupled to short cars under certain conditions; by having long, light cars preceding blocks of heavy loaded cars; by having slack

run in against the locomotive; * * *—AAR Guidelines, 2.2.12.1 General—Curvature Considerations, p. 2-99.

Despite the unenforceable guideline, Southern Pacific in 1994 has already been involved in at least 5 accidents at curves—February 24 near Langtry, Texas; March 8, on the Mohave District; March 30 near Straus, New Mexico; April 20 near Harwood, Texas; and May 3 near Canyon, California.

Finally, Cause Code 713, closely related to Code 572, indicates "Interaction of lateral/vertical forces" as a cause, and also obscures improper train make-up as the true cause of a derailment. The incident at Dunsmuir is a case in point. That derailment was clearly caused by improper train makeup, as indicated by the Report of the California Safety Commission. The Commission noted that "This derailment is associated with excessive lateral forces; moreover, lateral forces are especially high on curves with combinations of long and short cars." Commission Staff Report, p. 27. The Commission concluded that "The carrier's rules regarding train make-up were not sufficient for the safe operation of trains at the accident site." Despite the obvious part played by improper train make-up in the derailment at Dunsmuir, the Southern Pacific Accident Report cited Code 713 as the cause of the derailment.

Based on the preliminary 1993 statistics from the FRA, the railroads reported 70 accidents caused by improper train make-up. This total may vary in the final statistics because of a few accidents occurring between two railroads. A typical example is an accident at Schulenburg, Texas on March 2, 1993. The accident resulted in \$1 million in property damage. This train consisted of 102 cars with 16 empty cars located in front of a block of 27 loaded cars, which is unsafe. The crew had complained in advance of the hazard, but the railroad's supervisors ordered the train to leave the terminal anyway. If desired, we will submit the 70 accident reports to the Committee.

The FRA has improved the accuracy of reporting improper train makeup. Beginning in 1992 railroads were required to specify in one of six accident cause codes variations in improper train make-up. Nevertheless, we still suspect there is underreporting of this particular cause. For example, in 1992 we uncovered at least a dozen accidents in which the railroads did not accurately report improper train make-up. We also question apparent inconsistencies in some railroads reporting. For example, in 1992 and 1993 the Southern Pacific attributed only 7 accidents to improper train make-up, while Union Pacific reported 35 and Burlington Northern 28. We believe Southern Pacific has improperly reported the accident causes.

Irrespective of the accuracy of the causes of accidents attributed by the railroads, the data overwhelmingly dictate that train make-up regulations should be promulgated.

Although AAR guidelines exist which cover the distribution of tonnage on trains, as shown above, many railroads do not abide by the guidelines, and they are not enforceable because there are no federal regulations governing this very hazardous condition of train operations. Additionally, the reporting requirements make it easy to obscure improper train make-up as a cause of train derailments.

Senate Bill S. 1640 introduced by Senator Exon, which RLEA supports, contains a section which would require the Secretary to conduct a study of the placement of cars on trains. We appreciate your leadership Senator Exon and your willingness to study this issue. However, we urge you to expand the provision and require the issuance of a rule covering train make-up after the study is completed.

We understand that DOT will address placement of hazardous materials cars in Docket HM 201-A. This would only partially deal with the overall problem. Also, FRA has \$500,000 earmarked for a study on train make-up. The time for studying this issue has long passed. It is time for a rulemaking. We recommend that Congress require the FRA to adopt the AAR's existing train make-up requirements until FRA could formalize different standards. At least, this would address the issue now, rather than several years hence.

NO EMPLOYEE SHOULD BE REQUIRED TO RESPOND TO A HAZARDOUS SPILL DERAILEMENT UNTIL THERE IS A PROPERLY AUTHORIZED, QUALIFIED DETERMINATION ON THE NATURE OF MATERIAL AND WHAT THE APPROPRIATE METHODS OF PROTECTION NEEDED TO BE TAKEN BY SUCH CREWS

On October 7, 1986 RLEA petitioned the Research and Special Programs Administration to seek protection for workers exposed to hazardous materials spills. RSPA did not even acknowledge receipt of the petition. We brought the issue to your attention in 1989 and 1991. Again, today, we are asking your Committee for assistance.

Several crafts of railroad workers are exposed to hazardous materials spills from rail cars. These employees are required to clean up the spills, or inspect cars suspected of leakage. In many cases the crews are not provided protective clothing, nor

advised about the harmful effects of the hazardous material. OSHA requires protections in other industries, but rail workers are left to the whims of their employers. In the hearings during 1989 on proposed amendments to the hazardous materials laws, we provided a concrete example of the problem. On the Chessie System two maintenance of way crews were required to clean up a spill from 6 tank cars. The first crew was not informed as to what they were cleaning up, nor were they provided protective clothing. After a very short period of time, the crew was forced to leave the scene because of severe burning each worker's eyes. One of the crew members has since died from cancer. On the crew that replaced the first one, at least one other member is dying from cancer.

STANDARDS SHOULD BE ISSUED FOR MAINTENANCE OF WAY EQUIPMENT AND MACHINERY

In May, 1990 the Brotherhood of Maintenance of Way Employees filed a petition with FRA seeking, among other things, standards for maintenance of way equipment and vehicles. The FRA has not acted on this part of the petition. Maintenance of way employees continue to suffer the highest rate of injuries and death per man hour worked of any craft in the railroad industry. Many of these injuries result from defective vehicles and equipment. In 1990 the State of Rhode Island imposed safety standards for maintenance of way equipment and vehicles. The carriers in that state, including Amtrak, consented to the provisions being imposed. It follows that the proposals submitted by BMW, in Rhode Island are not onerous. Those provisions are substantially the same as contained in the petition to FRA. We will lodge with the Committee a copy of the relevant provisions of the petition to FRA. It is noteworthy that the NTSB has also recommended some type of standards be imposed in this regard.

STANDARDS SHOULD BE ISSUED COVERING RAILROAD BRIDGE CONSTRUCTION, MAINTENANCE, AND INSPECTION

The shocking tragedy at Saraland, Alabama on September 22, 1993 highlighted the lack of adequate federal safety standards covering the construction, maintenance, and inspection of railroad bridges, inclusive of signal devices or warning systems designed to detect displacement or misalignment of bridges, track and/or structures. Had the bridge there been properly maintained and inspected in accordance with appropriate regulations, the structural components of the bridge would have been adequately fastened and secured, thereby reducing the chance of misalignment. This is not the first accident that could have been prevented by adequate warning systems. The NTSB investigated a Union Pacific derailment in Utah which occurred on November 17, 1979 and made the following recommendation: "Study the feasibility of installing a mechanism which can be incorporated in the automatic block system to indicate when bridges are displaced." In that particular accident the bridge had been displaced approximately 30 inches.

The Committee should be aware that warning systems already exist and are employed on many railroads throughout the country. These signal devices are designed to warn approaching trains of hazards such as broken rails, malfunctioning track switches, high water and other dangers. Such technology is readily adaptable for bridge warning systems. Had the particular bridge at Saraland been equipped with an electronic mechanism in the automatic block system to indicate that the bridge track structure had been displaced, that accident would not have occurred.

It should be kept in mind that this is not an isolated incident. Another similar incident occurred on January 18, near Amelia, Louisiana on Amtrak's Miami to Los Angeles Sunset Limited train. There, the train was carrying 147 passengers and 15 crew members when it was alerted to stop approximately 10 minutes from a bridge which had been damaged, moving it approximately six inches out of alignment. The potential disaster was averted because a bridge tender promptly notified authorities after a loose barge had hit the bridge.

The rail industry would have you believe that millions of dollars would be required to equip the bridges with appropriate signaling devices. However, a simple "trip wire" type of device could be installed at a cost of less than \$1,000.00 per bridge. We have been advised that the FRA has substantially completed an analysis of available detection systems capable of identifying misalignment or other structural damage to railroad bridges in communicating warning through the signal system or by other means. Such information will assist FRA in determining what type of system should be installed.

The BMW has petitioned the FRA to initiate immediate rule making to develop and implement comprehensive bridge safety standards for the construction, maintenance, repair and inspection of the structural components of the nation's railroad

bridges. Such standards should be inclusive of specifically prescribed remedial actions to be applied upon detection of deviations, and should include restoration or renewal of bridges under traffic conditions.

The development and implementation of comprehensive bridge safety standards are long overdue. In fact, the historical dearth of safety standard for the structural components of the nation's railroad bridges remains incomprehensible given the recognition by Congress that rail safety standards, such as the FRA Track Safety Standards, are so vital to the welfare of our nation's rail system, its employees, and the general public.

Inasmuch as railroad bridges are an integral part of the rail system, regularly oversight is long overdue. Other agencies, such as the American Association of State, Highway and Transportation Officials (ASHTO), have recognized the need for standard specifications for highway bridges, in order to protect public interest and lives. As such, the standard specifications for highway bridges adopted by ASHTO have been in effect for well over sixty (60) years. There is no valid reason that railroad bridges should not be covered by similar standards. It is noteworthy that the American Railway Engineering Association (AREA) has long had a comprehensive set of "recommended" practices detailing specifications for the construction, maintenance and inspection of every type of railroad bridge structure in existence. As part of its petition, the BMW submit that the AREA standards be incorporated by reference as a new national regulation. As yet, neither the carriers nor the FRA have offered any viable alternative or credible rationale against adoption of these standards.

Considering the history of accidents and incidents related directly to railroad bridges, and the impact these accidents and incidents have had upon rail employees and the public, the lack of safety standards for railroad bridges can no longer be permitted. Contrary to what some would have you believe, the elements which contributed to the Saraland, Alabama accident was not unique. Given the continued lack of bridge safety standards, this type of accident could happen again, whether it involves a passenger train or a freight train carrying hazardous materials.

STANDARDS SHOULD BE ISSUED COVERING PASSENGER TRAIN SAFETY.

RLEA has for many years urged the FRA to impose passenger car safety standards. FRA has not responded with a rule making. Rather, the agency is now focusing on the safety of the future high speed rail systems on the Northeast Corridor. We do not oppose the effort, but this should not be undertaken at the expense of the existing passenger system. The existing passenger trains will be running for many years, and it is pure speculation when the next generation of fast trains will become a reality nationwide. The recent tragedy near Mobile highlights some of our concerns. There were no emergency lighting to assist passengers, many did not know where the exits were located, the side structures of the cars experienced excessive damage, and baggage was not safely secured. The NTSB has on a number of occasions addressed these and other passenger train safety problems. Still, there remains an institutional reluctance by FRA to formally address the problems.

ALL PROVISIONS IN FRA REGULATIONS WHICH DELEGATE CERTAIN RULE MAKING FUNCTIONS TO THE RAILROAD INDUSTRY SHOULD BE REPEALED

In 1966, when DOT was created, it took over the ICC's tank car jurisdiction. The Research and Special Programs Administration of the DOT promulgates the rules and regulations relating to tank cars, and the FRA enforces the applicable laws affecting the safety of hazardous materials transportation on the railroads. The regulations cover the design, construction, maintenance, and loading of tank cars. They specify tank shell and head thickness, materials of construction, maintenance, loading of tank cars, welding techniques, safety relief device design, tank car repair procedures, and all other aspects of hazardous materials transportation.

The Federal government, through the FRA, delegates the authority to approve tank car designs to the AAR. Before any tank car may be used on the railroad system, the AAR Tank Car Committee must approve of its use on the rails. The builder of a tank car must apply for approval of the design, materials and construction, to the AAR for consideration by its Committee on Tank Cars.

The AAR's Tank Car Committee is a standing Committee of the Mechanical Division of the Association of American Railroads and is composed of 13 members from the railroads, tank car builders and shippers. In addition, representatives of trade organizations: the American Petroleum Institute, The Chlorine Institute, The Compressed Gas Association, Chemical Manufacturers Association, National LP-Gas Association, and the Railway Progress Institute serve on the Committee. The railroad

representatives, which constitute a majority on the committee represent their own railroads and carriers within their geographical area.

The AAR Tank Car Committee is made up of two standing Sub-committees and nine working groups which study various problems and develop recommendations as requested by the parent committee. The nine working groups deal with these subjects: 1) safety relief devices and other appurtenances; 2) general designing and design details; 3) materials and welding; 4) marking, loading appurtenances and operation; 5) certification of facilities, repair and lining; 6) accident review; 7) tank containers; 8) metrication; and 9) editorial. The Tank Car Committee selects experts from the railroads, shippers, tank car builders, and suppliers to participate in these working groups. There are also a few government representatives on some of the working groups.

The AAR's "Specifications for Tank Cars" is published as a manual by the AAR. This manual includes the federal regulations relating to tank car specifications, in addition to any other AAR standards regarding tank cars.

An Application for Construction for tank cars to be built to any new specifications must be submitted to the Tank Car Committee. Justification for the new specifications, including the properties of lading and the method of loading and unloading must be submitted. The Subcommittee on Specifications of Tank Car Committee reviews the proposed specifications and reports its recommendations to the full AAR Committee on Tank Cars. If the Tank Car Committee finds that the proposals are in compliance with regulations and specification of the federal government, the application for construction will be approved. If new specifications are involved, the next step is to apply to the federal government for approval. The recommendation by the AAR Committee on Tank Cars, in nearly all cases, is approved by the DOT. Before a tank car is actually placed in service, the builder assembling the completed car must furnish to the Bureau of Explosives of the AAR and to the car owner, a Certificate of Construction certifying that the tank, equipment and car, in its completed condition, comply with all requirements of the applicable specifications. When tank cars are identical in all respects and are built in groups, one Certificate of Construction suffices for each group.

There are approximately 135,000 tank cars which transport hazardous materials. These tank cars are involved in over one million shipments annually. According to FRA accident records, in 1993 of the tank cars hauling hazardous materials which were involved in accidents approximately 57 of these cars released some or all of their contents. Approximately 25,000 of these tank cars are used to transport LPG and other liquefied flammable gases.

The NTSB has stated:

* * * the Tank Car Committee provided a great opportunity for members representing chemical manufacturers and tank car owners to control many key decisions affecting transportation safety and provided little or no opportunity to specifically identify or consider public safety concerns.

The Board also noted that Tank Car Committee members such as chemical manufacturers and tank car owners

* * * are capable of influencing decisions on matters pertaining to safety, such as tank car retrofits and tank designs, by giving undue consideration to the economic impact on tank car owners and shippers and thereby adversely impact the safety of railroad operations and public safety.

The NTSB also found the development of uninsulated stub-sill tank cars and the removal of full center sills from beneath the tank cars is a prime example of the Tank Car Committee letting economic concerns outweigh safety concerns. The center sill provided protection during tank car derailments and the insulation provided better protection from pressure buildup within the tank car.

Another safety feature, which the AAR "regulates", is periodic testing of brake components. The FRA regulations state:

Brake equipment on passenger cars must be dean, repaired, lubricated and tested as often as necessary to maintain it in a safe and suitable condition for service but not less frequently than as required in Standard 5-045 in the Manual of Standards and Recommended Practices of the AAR.—49 C.F.R. § 232.17.

As you can see, the FRA allows the AAR to set its own standard regarding the testing procedures and periodic attention requirements of air brake equipment. This essentially allows rail carriers to set standards through their own professional association.

In January, 1992 the AAR eliminated the "periodic attention" requirement in its Field Manual. The AAR justified this action in changing its testing requirement when cars are on shop tracks by increasing air pressure during testing to 80 PSI and 90 PSI instead of 70 PSI as done previously. However, the test always should

have been performed at that air pressure because the engines on trains set pressure at 80 to 90 pounds while running trains.

The bottom line is that if the railroads do not want to comply with FRA requirements, they just simply change the AAR code requirements to eliminate them. They can do this because there is no regulatory prohibition.

In conclusion, the FRA has failed to exercise sufficient direction or control over the AAR's implementation of the authority delegated to it for tank car safety and brake component testing to assure that public safety concerns are appropriately weighed against industry economic concerns. The FRA's delegation of power to the AAR has resulted in a self-regulated system which does not provide adequate public safety accountability on decisions made affecting tank car designs, construction, modification, as well as testing of brake components.

NOTWITHSTANDING ANY OTHER LAW TO THE CONTRARY, WHENEVER A STATE OR LOCAL JURISDICTION CONDUCTS, WITHOUT PROBABLE CAUSE, AN ALCOHOL OR DRUG TEST OF A RAILROAD EMPLOYEE AFTER AN ACCIDENT AT A GRADE CROSSING, THE EMPLOYEE TESTED SHOULD BE ENTITLED TO MONETARY DAMAGES FROM THE ENTITY THAT REQUIRED THE TEST TO BE PERFORMED

Alcohol and drug testing issues continue to plague railroad workers. Since the FRA testing regulations were adopted, states and local jurisdictions have taken crews off of trains and tested them, even though there was no suspicion that any crew member had used alcohol or drugs. The sole reason for such a test was a collision at a crossing with a motor vehicle. The federal regulations specifically preempt states from testing railroad workers except to enforce a criminal law. One police officer at the scene of a collision remarked that the local jurisdiction didn't care what the federal law provided, that the city will do what it wants to do. Rail labor has spent thousands of dollars in legal fees to prevent such improper testing, and typically, the states & local jurisdictions, claim that the employees have no private right of action. Fairness dictates that Congress provide an adequate remedy for rail workers who are illegally tested. After all, Congress mandated that we be tested, and it should eliminate any inequities which have resulted.

THE FEDERAL RAILROAD ADMINISTRATION SHOULD ESTABLISH NEGOTIATED RULE MAKING COMMITTEES IN AN ATTEMPT TO REACH CONSENSUS ON PROPOSED RULES OR REGULATIONS

There simply has to be a more efficient process at FRA to conclude rulemaking proceedings. Currently it takes an inordinate amount of time from the inception of a proposal to its final conclusion. One method which we have been analyzing is worthy of adoption. That is, the FRA should be required to establish negotiated rule making committees in an attempt to reach consensus on proposed rule making or regulations. By this procedure, if all of the interested parties reach an agreement, the time for FRA staff to evaluate such issues would be greatly reduced.

We want to point out that the FRA Administrator is experimentally attempting this procedure in dealing with the issue of protection of employees working on or near tracks. We address this substantive issue in amendment 16. We applaud Ms. Jolene Molitoris in her utilizing the negotiated rulemaking concept and we pledge our support in making the procedure a success.

As you are aware, Congress has addressed this issue in two statutes, The Federal Advisory Committee Act, and the Negotiated Rulemaking Act. Each of these laws merely authorize an agency to put into effect what we are suggesting here. We believe that Congress should mandate the procedure at FRA, even if it is for a limited period of time such as five years. Then, Congress could reevaluate the effectiveness of such a process without having to repeal the law.

THERE SHOULD BE A WORKING RADIO ON ALL MANNED MOVING EQUIPMENT, INCLUDING BUT NOT LIMITED TO, LOCOMOTIVES AND MAINTENANCE OF WAY EQUIPMENT

In 1987 FRA conducted hearings on the overall issue of radio communications on the nation's railroads. The current administration also held a hearing on this issue. Still, after 7 years, we are no further along toward a formal rule. The excuses given in the past is that FRA was awaiting decisions by the railroads on whether the new computer age technology would be put to use. It is apparent that the railroads do not intend to make the necessary financial commitment to install a new communications system. Instead, we believe the industry will be seeking federal funding. The industry's procrastination, and FRA's inaction, necessitates that Congress fill the void by at least requiring a working radio on each locomotive. The existing regulations requires only that the radio be in good working condition, if one happens to be on the engine.

The need for positive train separation requirements once again was highlighted by the deadly collision in Nebraska on June 8 involving three Burlington Northern trains. The technology exists which could have averted this latest in a string of collisions. If such safety systems had been in place trains would automatically stop if the engineer became incapacitated, exceeded the speed limit, or failed to respond to signals. The existing procedures used by the railroads simply do not provide adequate safety.

On May 19, 1994 the Brotherhood of Locomotive Engineers filed a petition with FRA covering the issue of positive train separation. If adopted, we believe there would be a significant safety improvement.

The Administrator on several occasions announced that she intended to take action to prevent train collisions. Obviously, RLEA supports any such effort. However, a working radio is a critical safety component, and must be required even if a new positive train control procedure be used in the industry.

THE USE OF REMOTE CONTROL LOCOMOTIVES SHOULD BE PROHIBITED

Four small railroads in the U.S. have embarked on operating locomotive by remote control. The device is about the size of a car battery equipped with various knobs, levers, and buttons. It has the ability to move the locomotive while the operator usually stands on the ground beside the engine. Many of the operations require the operator to stand on the front of the engine, which is very dangerous. The FRA has not curtailed these operations, even though they violate various FRA regulations. The rationale for the use of the remote control is that it results in the reduction of crew size. This is a poor reason to initiate a potentially unsafe procedure. We believe the device creates a safety hazard in its operations. We are concerned because other radio signals can interfere with the operations, there may be electromagnetic exposure from the transmitter, and last, but not least, injuries have occurred with its use.

IT SHOULD BE A VIOLATION OF THE FEDERAL RAILROAD SAFETY ACT TO REMOVE A SHOP TAG FROM A CAR OR LOCOMOTIVE UNTIL THE APPROPRIATE REPAIRS HAVE BEEN COMPLETED

The FRA last year conducted hearings throughout the country in Docket No. PB-9 relating to power brake issues. The hearings demonstrated that carriers frequently attempt to avoid repairing cars found to be defective. One of the tactics is to remove a "shop tag" which specifies the nature of the defect discovered and directs the car to be sent to a repair track. Congress has made it a federal violation to tamper with equipment. Removing a shop tag is just as dangerous, and this unsafe act should also be a violation of the railroad laws.

THERE SHOULD BE A FLAGMAN/WATCHMAN AT ALL LOCATIONS WHERE AN EMPLOYEE IS WORKING ON OR AT A TRACK OR ROADBED; OR, IN THE ALTERNATIVE, SUCH EMPLOYEE SHOULD HAVE ABSOLUTE RIGHT TO PREVENT ANY TRAIN MOVEMENT WITHIN ONE-HALF MILE OF WORK SITE

Between January, 1988 and February, 1994 a total of 31 employees working on or alongside tracks were fatally injured. The accidents were caused by the employees being struck by the movement of on-track equipment. Twenty persons were struck by a train and nine were killed by maintenance of way equipment. There have been many near misses which were not documented. The problem is that most railroads do not provide a watchman for oncoming traffic, nor are there communications to alert the ground crew that a train would be passing the work site. Also, employees are not permitted to stop traffic at such locations. There are no adequate means of protecting maintenance of way employees working on or near the tracks.

Last June both the Brotherhood of Maintenance of Way Employees and the Brotherhood of Railroad Signalmen filed petitions for emergency orders with FRA. The petitions were denied in September, 1993. The BMW and BRS requested reconsideration after subsequent fatal accidents occurred. The FRA has not ruled on the latest requests. BMW and BRS representatives have attended several meetings at FRA, the latest being on June 3. The FRA Administrator and her staff have indicated that the agency will address this issue in a negotiated rulemaking process. Therefore, a policy set by Congress would reaffirm that adequate protection must be provided employees working on or near tracks.

As the basis for mandating uniform employee safety protections within the railroad industry, one only need look to the fatality record since 1988. The BMW and the BRS have continually maintained the only way to provide maintenance of Way workers adequate protection is to require flagmen/watchmen, whose sole duty is to protect the lives of rail employees engaged in maintenance or renewal activity on

or in close proximity to the track structure; or in the alternative, to require railroads to grant maintenance of way workers the absolute right to stop any train movement within one half mile of their crew or worksite. Such regulatory oversight must be mandated wherever these employees are exposed to moving trains and/or operating maintenance machinery.

It is important to note that the trend in fatal accidents involving moving equipment and maintenance of way workers has escalated as rail traffic surged to record levels and rail employment declined.

Nineteen (19) of the thirty-one (31) fatalities mentioned above have occurred since an initial BMWE petition was filed in May, 1990 calling for worksite flagging protection. Eight (8) of these fatalities have occurred in less than ten months from April 8, 1993 to February 9, 1994.

A review of reports provided by the FRA indicate that of the thirty-one (31) fatalities, at least twenty (20) involved accidents which could have been prevented had uniform regulatory measures such as those proposed by the BMWE and the BRS been in place. More recently, had such precautionary measures been mandated following the initial petition for emergency orders in May of 1993, none of the five (5) subsequent Maintenance of Way fatalities would have occurred. Unfortunately, the absence of an emergency order allowed carriers to require maintenance of way employees to work on or near the track, either without the benefit of watchmen/flagmen or without having the absolute right to stop any train movement within one half mile of their worksite in order to protect themselves and their activities.

In response to the initial requests for emergency orders requiring flag protection, the FRA responded by letter dated September 22, 1993, stating Congress declared that such an order can be invoked only in "an emergency situation involving a hazard of death or injury to persons." Thus, the FRA contended it had no legal authority to issue such an emergency order. Certainly, the 31 fatalities, eight (8) within the last year, constitute an "emergency situation" involving hazard of death or injury and provide unquestionable reason for Congress to set a policy to reaffirm the adequate protection which is so vitally needed.

Rail labor recognizes that individual carriers have attempted to address this critical safety issue through their own operating rules, internal operating practices or policies, or in a few cases, through their collective bargaining agreements. With few exceptions, the wide range of unilateral carrier practices have failed to abate the unsafe conditions, which resulted in the fatalities and numerous injuries throughout the industry during the last six years.

One of the most successful "protection against moving train" programs presently in place, for example, can be found on AMTRAK. Key components to the AMTRAK program include superior rules addressing all aspects of employee safety, training, and enforcement procedures. Congress can play a key role by requiring that any regulatory rule adopted, must necessarily provide appropriate and continual training for all employees covered by the rule. Such rule must eliminate all fear of discipline or reprisal as a result of a covered employee exercising his/her right to enforce the rule. For example, as Mr. John Cunningham, Assistant Chief Engineer for AMTRAK, has so poignantly stated, each covered employee should have "a no-fault right to enforce safe conditions." Therefore, the most viable safety regulation for protecting maintenance of way employees against moving trains should also provide specific procedures for a no-fault right to enforce the rule through employee empowerment. Consequently, we ask Congress to issue a policy provision that any federal regulation and/or emergency order implemented must provide no less than currently required by the most stringent maintenance of way worker protection program presently in existence.

We want to emphasize that the use of radios alone will not correct the hazard. Radios in use on the railroads sometimes are not reliable, and frequent noise problems interfere with clear transmissions.

Some examples of prior accidents may be helpful to better understand the problem.

On December 17, 1993 at Ottawa, Illinois two BRS members were struck by an Illinois Central train while they were working with a snow melter. There was no watchman provided by the railroad, nor were any communications given to the crew that a train would be passing the work site.

During the above mentioned time frame, two fatal accidents involved employees who were operating rail grinders. A rail grinder is a hand-held gas powered device similar to a chain saw. It has a motor that drives a grinding wheel and is used to grind away the steel surface of a rail. It is an excessively loud machine when in operation. In each instance, radio communications to the employee proved insufficient to protect their lives.

At Loveland, Colorado a track inspector was killed while tightening track bolts. He was working behind a hi-rail truck which obstructed his view of a runaway freight car. Obviously, a radio is useless to warn of a danger when no one knows a danger exists. However, had there been a watchman present, this life could have been saved.

Investigators point out that every accident is unique, with different contributing factors. As the above examples illustrate, in many cases loud machinery and ear protection prevent employees from hearing approaching trains, and in other cases views of the trains are obstructed. However, it must be emphasized that, regardless of the underlying causes, all of these types of accidents are preventable with the simple safety measures that we advocate.

Just as there are many causes and contributing factors responsible for automobile accidents, experts agree that a few simple safety measures, the use of seat belts and air bags, can prevent most automobile fatalities and injuries. So too, the use of watchmen or granting railroad workers the right to stop trains approaching at a work site will prevent death and injury among railroad workers.

A RAILROAD SHOULD BE REQUIRED TO RENEW EACH REQUEST FOR A WAIVER WHICH HAS BEEN GRANTED AND STILL IN EXISTENCE AT THE END OF THREE YEARS FROM THE DATE OF ISSUANCE

Currently, there are between 200-300 waivers sought by railroads from the FRA annually. In earlier years even more waivers petitions were filed. Between 1981-1984 there were 1,311 waiver petitions received by FRA. The records show that an overwhelming majority of the petitions are granted. The problem is that FRA does not regularly monitor the thousands of waivers to determine whether they should be continued. We doubt whether FRA knows exactly how many are in effect. The RLEA believes that each waiver which is granted should be re-examined every 3 years by requiring the railroad to present documentation justifying the need for the waiver.

One particular waiver stands out to support our point. In 1987 in FRA Docket RS&I-AP.No.1017 the agency granted the Southern Pacific a waiver which permits the carrier to conduct efficiency testing that would otherwise violate FRA safety requirements. The test includes a "surprise stop" by the engineer without the benefit of a yellow warning signal. This creates a situation which will cause an undesired emergency if brake defects exist. It is not uncommon for trains to have some type of brake defect in their consists. The application of this waiver with long, heavy trains carrying hazardous materials over mountainous terrains and curves, creates a serious potential for an accident. The RLEA sought revocation of the waiver in 1990 which was not granted. This is the type of situation which demands regular monitoring. At least every 3 years the carrier should be required to justify the need for each waiver.

COMMENTS ON THE ADMINISTRATION'S PROPOSED LEGISLATION S. 2132

On May 18 Senator Exon introduced the Administration's proposed safety legislation, S. 2132. Section 3 of the bill would allow any parties covered by the Hours of Service Act to jointly petition the Secretary for approval of a pilot project to demonstrate possible improvements in the law. Everyone knowledgeable with the Hours of Service Act knows that there are thousands of very tired railroad workers engaged every day in train operations. Something must be done to alleviate the problem. However, we do not believe the waiver process is the correct approach. First, RLEA opposes the concept of waivers under the Hours of Service Act. Secondly, since the proposed amendment requires concurrence of all parties involved, this may be best handled by direct negotiations with the carriers. We note that, for different reasons, the AAR has opposed this provision also. Section 4 of the bill would expand FRA's authority to disqualify an employee for violation of a federal railroad safety statute. Currently, FRA has authority to disqualify an individual for violation of a rule, regulation, order, or standard, but not for violation of a statute. The RLEA supports this amendment because common sense dictates that violations of statutes are equally as serious as violations of regulations, and FRA should have equal enforcement powers for violation of either. Section 5 relates to changing FRA's annual reporting requirements to Congress and the public to a two year mandate. We recognize that manpower shortages exist throughout FRA, but that doesn't justify not keeping Congress current on FRA's activities. Most of FRA's activities are computerized and in dealing with serious safety matters, outdated information is useless. Therefore, Congress should retain the annual reporting by FRA.

S. 1640

RLEA supports the enactment of provisions of S. 1640 which was introduced by Senator Exon. We suggest a change in Section 10 relating to placement of train cars. The section, as drafted, only requires a study. As we have already discussed, too many accidents have occurred because of improper train make-up.

At the very least the industry's own standards should become enforceable by FRA until the agency could craft another set of standards. There is precedent for such legislation. When Congress enacted the Power or Train Brake Safety Appliance Act of 1958, the AAR's power brake standards were incorporated by reference as federal law. The provisions served to improve safety of the brake systems, primarily because Congress prohibited any changes in those standards except for the sole purpose of achieving safety. We recommend the same type of procedure be adopted here.

S. 2127

Senator John Danforth recently introduced S. 2127, which is aimed at improving safety at grade crossings. RLEA supports the proposed legislation. As pointed out by Senator Danforth when the bill was introduced, in 1993 grade crossing fatalities increased from 579 to 614, a 6 percent increase over 1992. He further said that a vehicle and train collide every 90 minutes in the U.S. at an average cost of approximately \$1.8 million annually.

Senator EXON. Thank you very much, Mr. McLaughlin. Thank you also for introducing Mr. Mann as an associate of yours. I thought he was a member of the committee. [Laughter.]

You straightened me out, and I thank you for that.

I have several questions which I will try and get through before the bell rings up there again for another vote.

Toward the end of your statement you said, Mr. McLaughlin, that study after study by this committee has not led to something. Would you repeat that? What did you say about that right toward the end of your statement?

Mr. McLAUGHLIN. Yes, I said yet study after study and endless committees lead to only deferred action. For instance, we have been studying the work/rest cycles for years, I might say, and we still cannot come to any resolution as to any procedures that we can use or any that would help regulate the lives of these people, these engineers that are running the trains on the road. They have such a periodic cause that they vary from day to day and week by week and some never get days off that are meaningful. They are on call, on a 2-hour call, most of the time. And we think in the days of the computers and the line-ups that we should be able to get a reasonable call. An 8-hour call would be very good so we could prepare to go to work, so we would not be tired.

I have actually run a train for 38 years, and during that 38 years a lot of times I have been told several times during that day that I would not be going out on the road that night, and I would lay my head on the pillow at 10 or 11 o'clock or whatever time, and no more than I get my head laid on that pillow and the phone rings and says you have to go, and we do not have anybody else. Whether you are tired or not, you have to go. We think there should be some resolution to that.

Senator EXON. Well, I simply would say that those of us who have been wrestling with safety issues in the whole transportation industry, including rail, feel that some of the efforts which we have advanced have had something to do with the significant reduction in train accidents. That does not mean we have cured all of them.

Let me ask you this question: Do you support the pilot program on hours of service in the Exon bill that is before the Congress?

Mr. MANN. Maybe I could respond to that. We support working with industry to get at the root of the problem. But our concern, at least as far as rail labor goes, is that you are setting a precedent that we do not like. And that is under the procedures of the Hours of Service Act there would be a waiver process, and we just do not think that is the way to do it. In fact, we believe that existing law can accomplish the exact same thing that you are seeking.

We are all seeking the same thing, it is this question of how to do it. And we believe the existing Hours of Service Act permits just what your bill provides. And we would like to be able to demonstrate that to you that it can work through a joint labor-management process without the need of the legislation.

Senator EXON. Well, I guess it comes down to a situation it has not worked; has it?

Mr. MANN. No, it has not.

Senator EXON. And you do not think that provision in the Exon bill is a significant step in the right direction if we could get it enacted into law?

Mr. MANN. It is certainly worthy, there is no question about that. The issue is how to accomplish it. Do you need to do it by legislation? I submit, Mr. Chairman, that if you would simply suggest that in report language it would be accomplished, without the need for you to legislate it.

Since I am talking, Senator, let me point out one thing that bothered me a little bit, and that was the statistics. You were pointing out to the reduction in accidents and deaths in the rail industry, but I want to point out when you look at the FRA statistics, the area where there is great concern and great problems is something that is not even called an accident in the rail industry.

If a person cuts his or her arm off, that is not an accident under railroad terminology. That is an incident. Last year there were 13,400 casualties in nontrain incidents. That is of a rail worker on duty. And most of these are serious injury, many days, months off duty, and many of them permanent injury. And that has not shown up and not discussed in the statistical data that you get presented by the Agency.

We are talking about if you are looking at the number of employees out there there may be close to 90,000 operating employees in the industry. And when you have 13,400 nontrain incident casualties that is almost 15 percent per year of just those class. And I just want you to be aware that we are not just talking about the deaths. The injuries are very significant to us.

Senator EXON. Well, we did have some charts presented by the Administrator, as I am sure you saw, that were about casualties. Are you telling me that the casualties that she was talking about, are not the incident type of events to which you are referring here?

Mr. MANN. That is correct. She did not refer to incidents. She only talked about accidents.

Senator EXON. What about the rates of those incidents? Are they up or down or remaining flat?

Mr. MANN. They are a little—well, they are about flat, Mr. Chairman. But when you talk about 1978 to present, that is apples

and oranges because of two things. Number 1, the drastic reduction in employees over that period of time. There has been at least 50-percent reduction of employees, so the exposure is much less. Of course, you are going to have less injuries if you have less employees.

Senator EXON. Yes, if you have fewer employees.

Mr. MANN. No question about it. It is just not an accurate portrayal. And also, the definition of an accident has changed dramatically since that time in dollars. And that is the only criterion for an accident—the dollars. I think it is \$6,300 currently. If it meets that threshold it is an accident. If it does not meet that dollar threshold it is an incident.

Senator EXON. Well, I would say that we have taken due notice of what you said. I have every confidence in the Administrator and I am sure that you would not want to leave the impression that the Administrator was trying to mislead us here.

Mr. MANN. Oh, no.

Senator EXON. It just may be that they have not put their figures together in such a way as to reach your conclusions. You are saying that their conclusions probably are not accurate because of the information that they gave us versus the true facts?

Mr. MANN. They are different numbers to look at to draw conclusions. If you look at just accidents she is absolutely correct, but if you look at the area of incidents, while they have been reduced over the years, of course they have been reduced because the numbers of employees are less. But the percentage of injuries to an employee annually are about the same.

Senator EXON. Let me give you a chance, Mr. Harper. Would you respond with your view of what we just have been discussing here? Also, I would like to give you a few minutes if I might to respond to any of the comments made by Mr. McLaughlin, including the numbered list of items which he went through.

Mr. HARPER. Fine. I would be happy to do that, Senator. Let me begin by saying that we share rail labor's interest in safety. Safety does come first in this industry. We recently had the Harriman awards at which Mr. McLaughlin and I shared the podium. We are both members of the committee that present those awards each year which recognize the outstanding work of companies and employees in the rail industry in making this a safer industry.

The rail industry is a safe industry, and I think if you go back and look at the statistics that you can find all kind of statistics to prove almost anything you want and there are all kinds of definitions. One economist told me that the secret to winning a Nobel Prize is to pick the right base year for whatever economic series that you want. We do share this interest in safety with rail labor, and I can go very briefly through the 19 different proposals that have been presented by RLEA here this afternoon.

Four of those proposals are the subject of ongoing activity today. Perhaps most important of those is the Hours of Service Joint Task Force on which the AAR, the Brotherhood of Locomotive Engineers, and the UTU are working together. We are working together to develop the fact base, something that has been missing for a long time. There are lots of anecdotes, lots of opinions, but a systematic collection of the facts is needed. We are well through that, and

coming to a period when we can conduct some real live experiments to really develop what is the proper policy, what is the most effective policy to deliver safety to the rail industry and rail employees.

Other areas which are the subject of ongoing labor-management activity include the right of flagmen to stop all trains. Also, there are FRA rulemakings going on with respect to the prohibition of loaded placarded cars at the rear end of trains, again, developing the fact base to respond to that. Also, standards for maintenance of way equipment and machinery is the subject of a current FRA rulemaking. So, I think really they are beyond the scope of legislation we are talking about today.

These four items in particular are areas that the AAR is working with rail labor, with the FRA, to come up with what is the appropriate course of action. We believe in fact-based rulemaking, whether it is by legislation or the FRA. That does not mean anecdotes or opinions.

Nine of these proposals need more facts to be developed. For example, the requirement for greater OSHA participation. We, too, want to know who is responsible for developing the rules and who has jurisdiction. We share that interest with rail labor. But to say automatically OSHA rules ought to apply and not FRA's we think inappropriate.

Bridge construction and maintenance: Where are the facts that suggest a change is required? In fact, there are inspection procedures out there today. There has not been a fatality as a result of bridge construction that we are aware of in the past 50 years. So that is suggestive of the kinds of things that are required.

Some proposals also I think are based on some misunderstandings. For example, talking about delegating rulemaking authority to the carriers. First of all, the only delegation that we are able to find deals with the subject of the Tank Car Committee in the rail industry. And there is a 1986 opinion of FRA's general counsel, setting out in great specificity the scope, dimensions, and restrictions, on that delegation.

Furthermore, any delegation given can be taken back immediately. Therefore, we do not see a need for a 3-year cycle and generating all the paperwork that would come up in that kind of a situation.

Senator EXON. Mr. Harper, I have exactly 4 minutes left. I have a question which I would like to ask each of you if you could spare me a little time.

Mr. HARPER. Sure. I was just going to say proposal 13 in the list that we received suggested negotiated rulemakings, and we heartily endorse that, and if you like we can comment for the record later on the individual proposals.

Senator EXON. I will ask you a question, then I will have a question for Mr. McLaughlin. Mr. Harper, what is AAR's position on the issue of the placement of event recorders in all manned moving equipment?

Mr. HARPER. In all manned moving equipment? Let me introduce Mr. Schultz, our solicitor for the AAR who is with me here today.

Mr. SCHULTZ. Mr. Chairman, the FRA does have an ongoing rulemaking on event recorders, and we have made suggestions how they might modify that rule before it becomes final. But that is

going to happen. There is going to be a rule where an event recorder is required on a train.

Senator EXON. And you support that, or it is something you have to accept since it is going to come down?

Mr. SCHULTZ. That is it.

Senator EXON. All right. I will not push you any further on that.

Mr. McLaughlin, a question for you. In light of the seeming rash of train accidents in the last several months, do you think that the industry could benefit from some additional training for freight railroad operating personnel?

Mr. McLAUGHLIN. Yes, I do, Mr. Chairman. I have a concern about the training of all engineers. We say in 6 months we can train you to be an engineer. But this is something that has evolved by the fireman being discontinued that was the former trainee for the engineer's position. That has been eliminated. Now, we have to go to new employees to make engineers. They do not have the benefit like I did to be a fireman for 15 years and then just automatically move over.

Senator EXON. You were a fireman sitting there watching the engineer, at least part of the time, over and over and over again, so you learned.

Mr. McLAUGHLIN. That is right.

Senator EXON. But basically new employees do not get that experience now.

Mr. McLAUGHLIN. You do not have that now. I think there needs to be a longer training period for engineers.

Senator EXON. Gentlemen, there will be some additional questions for the record.

I wish we had more time. I have lots of things I would like to discuss with you. I am sure you would like to talk with me. Thanks for being here. Please answer the questions we will submit to you for the record as quickly as possible.

With that, thanks again for your patience. Thanks for being here. You were both very helpful.

We are adjourned.

[Whereupon, at 5:25 p.m., the hearing was adjourned.]

APPENDIX

PREPARED STATEMENT OF SENATOR BURNS

Thank you Mr. Chairman. I am pleased to see that you have called this hearing to discuss this important issue. Rail safety is an issue that affects an increasing number of people every year and one that our combined efforts can truly improve.

Improving the safety at public railroad grade crossings is important not only to saving the lives of the motorists who utilize the highways, but also to helping the railroad workers and locomotive engineers who deal with the emotional trauma associated with these accidental deaths. The Brotherhood of Locomotive Engineers recently reported that career locomotive engineers expect to face 5 to 6 accidental deaths caused by the train they are operating during their years of service. This alarming statistic has a dramatic effect on the lives of the railroad employees as well as their families and friends—a tremendous burden to bear for those associated with railroad labor.

I commend my colleague, Senator Danforth, for his work to improve this situation and the safety at grade crossings. His legislation, Senate bill 2127, the Railroad Grade Crossing Safety Act of 1994, gets to the heart of this problem through education and safety programs to increase public awareness of grade crossing dangers. In addition this legislation, allocates responsibility for selection and installation of signal devices at public grade crossings and promotes rail safety technologies.

Collisions involving trains and motor vehicles at grade crossings were responsible for 4,800 deaths in 1993. Ironically, the primary cause of these deaths is not a lack of identification at the grade crossing but, a lack of public awareness that a race with a train is a race with death. With record high numbers of freight traffic already in 1994, this issue needs our immediate attention, and I urge my colleague to join in my support for this life saving legislation.

QUESTIONS ASKED BY SENATOR EXON AND ANSWERS THERETO BY MS. MOLITORIS

GENERAL

Question. What role is the Administration taking to ensure the highest degree of safety throughout the rail transportation system?

Answer. We are reengineering FRA'S safety program along customer service lines. This means opening our doors to all our customers—rail labor, rail management, suppliers, State and local governments, and users of transportation services everywhere—and welcoming their ideas and insights. We are transforming FRA from what once appeared to be a closed, reactive organization into an open, proactive customer service center, an agency that listens and reaches out to its customers as we strive together for zero deaths and zero injuries.

RULEMAKING STATUS

Question. Please outline for the committee, the safety rulemakings and studies that currently remain outstanding from the mandates of the 1992 Rail Safety Act, particularly proposed regulations for improved track safety standards. What system of prioritizing is the Federal Railroad Administration (FRA) implementing to eliminate this regulatory backlog?

Answer. In late July of 1994, ten safety rulemakings and reports to Congress mandated by the September 3, 1992, rail safety amendments remained to be completed. The status of each is shown in this chart, which I would like to submit for the record. We are doing our best to meet an accumulated load of statutory mandates, but are running behind on many because of the weight of the workload and the limits on our resources.

We have taken three major steps to improve our timeliness in the regulatory area and ensure that statutory mandates receive the highest priority. First, we have de-

veloped a new computerized tracking system, which employs spreadsheet software, to identify the priority level for each project, the staff members involved, its current status, and future deadlines. Second, we have regular meetings of our senior safety managers and senior safety lawyers to establish realistic milestones and monitor progress on each project. Finally, we have involved senior FRA management—specifically, Deputy Administrator Donald Itzkoff—in the process of setting regulatory priorities.

As you know, we recently presented to the Congress the Report on Railroad Radio communication and Train Control. over the past year, we have also conducted advance notice proceedings for revision of the track and power brake safety regulations, including extensive workshops that involved hundreds of railroad employees and supervisors. We have had extensive consultations with industry parties regarding the issue of locomotive crashworthiness and working conditions and are now completing a second round of research on that issue for presentation and peer review this summer. We have been laying the foundation for each of the remaining pieces of work mandated by the statute.

In the next few weeks and months, we expect to issue:

- a final rule on maintenance, inspection, and testing of grade crossing signal systems;
- a final rule on remedial action reporting;
- proposed rules on power brakes, accident reporting, and track;
- a notice establishing a negotiated rulemaking committee on the protection of roadway workers; and
- reports to Congress on dispatchers, the regional attorney experiment, and hazardous materials transportation.

STATUS IN JULY 1994 OF OUTSTANDING RULEMAKINGS AND REPORTS TO CONGRESS
MANDATED BY SEPTEMBER 3, 1992, RAIL SAFETY AMENDMENTS

Grade Crossing

- Grade Crossing Device inspection NPRM issued 1-11-94; hearing held on 3-1-94; hope to issue final rule by 9-94.

Hazardous Materials

- Rail Transport Of Hazardous Materials [Report to Congress] due 9-3-93; draft in clearance.

Motive Power and Equipment

- Locomotive Crashworthiness and Working Conditions report or rule due 3-3-95.
- Power Brake Rule Revision final rule due 12-31-93; NPRM in clearance at the Office of Management and Budget; will address issues raised in 1990 rulemaking petitions filed by United Transportation Union and Brotherhood of Locomotive Engineers.

Occupational Safety and Health

- Roadway Worker Protection required to be “evaluated” under Track Safety Standards mandate, arguably under same deadline for rules; workshop held 3-31-93; safety summit, 6/3/94; draft notice of proposal to conduct negotiated rulemaking being revised.

Operating Practices

- Dispatchers [Report to Congress] due 3-3-94; draft report in review.

Track and Structures

- Track Standards Revision due 9-3-94; ANPRN published 11-16-92; four workshops held between 1-26-93 and 3-31-93; NPRM being drafted.

Miscellaneous

- Accident Reporting Threshold issue included in NPRM on accident reporting, which has been drafted and is in clearance; plan to issue in summer 1994.
- Remedial Action Reporting due 9-3-94; draft final rule in review.
- Regional Attorney Pilot Project [Report to Congress] due 9-3-94; second phase of project completed; report being drafted.

Question. Labor testified that certain rulemaking functions delegated by FRA to the Association of American Railroads (AAR) are insufficient to ensure the safety of rail employees. What type rulemaking delegations to industry does FRA support, and does FRA believe that these self-regulations, as opposed to Administration-mandated standards, enhance the enactment and enforcement of rail safety measures?

Answer. FRA does not delegate rulemaking functions to AAR. It appears that labor's concerns about delegation focus on two areas: (i) the interval for cleaning, oiling, testing, and stenciling (COT&S) of power brakes and (ii) certification of tank cars as meeting manufacturing specifications in the Hazardous Materials Regulations.

The regulatory cross-reference to AAR standards that is viewed as a "delegation" stemmed from 1958 power brake statutory amendments, which mandated that FRA's predecessor agency the Interstate Commerce Commission adopt, verbatim, the AAR's standards on inspection and maintenance of power brakes, including the provision on the COT&S testing interval (which referred to a separate document subject to change). Over the years, the AAR has lengthened the interval for COT&S, eventually abandoning that approach entirely in favor of a different procedure that is performed with greater frequency (the so-called "single car test"). Although this was always accomplished in consultation with FRA, the unilateral nature of the change meant that others had no formal opportunity to comment. The 1992 congressional mandate to revise the regulations governing power brakes provides the opportunity to ensure that future changes in essential safety procedures are carried out through rulemaking, and FRA will address the issue in that context.

On the tank car issue, neither FRA nor the Research and Special Programs Administration has delegated rulemaking functions to the AAR. Acting under authority traceable to the 1908 Explosives and Combustibles Act, the AAR Tank Car Committee approves applications for the construction, conversion, or alteration of tank car tanks when such tanks are in compliance with the Hazardous Materials Regulations of the Department of Transportation. The Committee also approves designs, fittings, methods, and materials for parts of tank cars, such as valves and other closures; these approvals are also governed by performance standards in the Hazardous Materials Regulations.

The AAR Tank Car Committee does not substitute for the FRA but rather provides an additional layer of examination and analysis. The railroads do not own tank cars, but have a vested interest in their good performance. The effect of prohibiting existing delegations to the Tank Car Committee would be to impose additional burdens on FRA and the Research and Special Programs Administration at a time when their budgets are already strained. Further information on this issue can be found in a January 1990 publication issued jointly by FRA and the Research and Special Programs Administration that is entitled "A Report on Tank Cars: Federal Oversight of Design, Construction, and Repair."

PASSENGER CAR SAFETY STANDARDS

Question. What recommendations, including those from the National Transportation Safety Board, for improving rail passenger car crashworthiness would FRA advocate be enacted? What time line is FRA currently using to actually implement rail passenger car safety recommendations?

Answer. FRA is working intensively across a broad front on issues concerning passenger safety, including the safety of passenger equipment. For instance, FRA has established a clear focus on braking system requirements for passenger equipment in the ongoing revision of the power brake regulations (for which the notice of proposed rulemaking is in review by the Office of Management and Budget).

Currently, FRA is conducting a nation-wide review of Amtrak's compliance with its instructions for inspection and maintenance of safety-critical items on passenger cars. This effort follows a process of consultation and program development in which Amtrak revised its guidance to mechanical personnel to clearly distinguish safety parameters from other concerns and disseminated that guidance to strengthen inspection procedures. FRA's review will help to provide a foundation for issuance of practical and effective regulations for inspection of passenger cars.

Crashworthiness is an important part of our ongoing work, as well. Although existing North American equipment designs are the most substantial and durable in the world, we can make additional progress. Issues that warrant review include the National Transportation Safety Board's recommendation for corner posts. Much has been done to improve securement of seats, fixtures, and luggage, but further study is needed with respect to luggage, and codification of safety improvements should also be considered.

Higher speeds introduce the greatest challenges to vehicle performance both in normal operations and in possible accident scenarios. FRA is completing work with Amtrak on an extensive list of safety enhancements to be included in the procurement of 26 high-speed trainsets for use on the Northeast Corridor and in other high speed service. That effort, which builds on extensive analysis conducted under FRA's high speed ground transportation program, will ensure advances in safety perform-

ance of this equipment. Areas for which enhancements are planned include glazing, interior surfaces, luggage and seat securement, structural strength (e.g., corner posts, floor-level side incursion), crash survivability, and other attributes. This effort is yielding valuable experience that can be applied in fashioning proposed generic standards for high speed equipment, with rulemaking commencing in fiscal year 1995. FRA will also evaluate the extent to which it is prudent to include new construction of conventional equipment in this rulemaking, based on commonality of issues and manageability of the rulemaking process.

FRA is extending its research into locomotive crashworthiness to include non-powered cab cars (which are used for passenger seating in push-pull intercity and commuter service). In the President's budget for fiscal year 1995, FRA has requested funding for additional research directed at safety requirements for conventional passenger equipment.

Working with all passenger-carrying railroads, FRA is examining the issue of emergency preparedness and response. We have distributed Recommended Emergency Preparedness Guidelines for Passenger Trains (DOT/FRA/ORD-93/24, December 1993) and have begun discussions regarding the objectives described in the report and the state of current emergency preparedness planning.

Work on the Amtrak inspection program, high speed trainsets, and emergency preparedness and the products of ongoing and planned research should provide a foundation to initiate rulemaking on conventional passenger train safety as early as fiscal year 1996. We will conduct rulemaking in phases or segments, if necessary and feasible. We appreciate the fact that timing is important (e.g., with respect to new construction), and we will look for opportunities to move forward as promptly as possible on issues for which adequate data and analysis are available.

HOURS OF SERVICE

Question. In prepared testimony, FRA stated the need for amendments to current hours-of-service provisions in order to facilitate pilot projects which explore enhancing safe working conditions for rail employees through regulation of employee fatigue issues. Rail labor and management alike have testified that such amendments are not justified. What is FRA's response to these positions?

Answer. Labor agreed that hours of service pilot projects would be a good idea, but thought that it was unnecessary to amend the terms of the hours of service laws by adding an explicit waiver provision overtly authorizing the Secretary of Transportation to grant waivers of those laws for the purpose of conducting the pilot projects. Labor believed that Committee report language would suffice FRA as authority to waive the hours of service laws. We disagree and think that, in construing these laws, courts would not override the plain meaning of the statutory language on the strength of Committee report language.

While also questioning the need for a legislative provision, the Association of American Railroads stated that it "does not object" to the pilot project amendment. In fact, both the railroads and the major operating crafts are working together to better define issues related to work, rest, fatigue and alertness. The result of that effort is likely to be one or more attempts to address working conditions that give rise to performance problems. Having the pilot project option available fits well with these ongoing initiatives.

As stated in the agency's prepared testimony, FRA believes that fatigue is a significant problem in the railroad industry and that the statutory structure does not afford an adequate remedy. The basic provisions of the hours of service laws have not changed since 1969. Much has been learned since then about work/rest cycles, but FRA cannot begin to apply that learning because the statute dictates maximum on-duty and minimum off duty periods. Having available the authority to approve consensual pilot projects will provide the foundation for identifying and demonstrating meaningful approaches to reform. To the extent these efforts are successful, relationships of trust and confidence will be built that can make more permanent implementation of those reforms less difficult and contentious.

SAFETY TECHNOLOGIES

Question. What is FRA's evaluation of the merits and the need for advanced train control systems? What is the Administration's role in ensuring the implementation of reasonable and effective safety technologies?

Answer. FRA is committed to providing leadership and support for the introduction of more capable train control technologies. As the Committee is aware, we have delivered our report to Congress on Railroad Communications and Train Control. In addition to examining voice radio communication issues, the report addresses Ad-

vanced Train Control Systems (ATCS) conceived by the Railway Association of Canada and the AAR and other technologies that can achieve positive train control.

ATCS is a microprocessor/communications/transponder-based system designed for both safety and business functions. ATCS uses digital data communications, including data radio, as a platform for a variety of functions. With the communication platform in place, these functions can be deployed individually or in various combinations. For instance, several carriers are using ATCS communications to replace landlines (i.e., pole line elimination). Although the train control functions of ATCS are generally regarded as higher-order functions, it is not necessary to wait for full deployment to realize safety benefits. ATCS communications can be used to transmit track occupancy and movement orders from the dispatching center to an on-board computer, in lieu of less secure voice communication. FRA is working with a major railroad to implement such a system in 1995.

ATCS and similar advanced technologies offer the opportunity to achieve positive train control at lower cost than older, signal-based automatic train control system. Positive train control (PTC) includes (i) positive train separation (e.g., prevention of main line train-to-train collisions), (ii) prevention of oversped derailments through enforcement of permanent and temporary speed restrictions, and (iii) protection for maintenance-of-way personnel and their equipment working on track under specific authority from the dispatching center.

In the report, FRA identified 116 collisions between trains and 30 deaths during the period from January 1988 to August 1993 that could have been prevented with PTC. However, initial costs for nation-wide implementation of PTC are estimated at about \$900 million, far in excess of the costs that could be offset under normal benefit/cost analysis. It is important, therefore, that we encourage use of technology that also returns other benefits. Further, we need to evaluate whether high risk lines can be identified for which PTC would be cost beneficial.

The report sets out FRA's substantial 18 point action plan which, in cooperation with a wide range of partners, will help bring about implementation of PTC on a significant portion of the national rail system by the year 2000. In addition to identifying high-risk corridor characteristics for future PTC installation, FRA will request proposals to launch a cooperative private/public project to test PTC technology on a high-speed rail corridor. FRA has included \$11.5 million in its proposed FY 1995 budget to initiate a multi-year agreement with a private vendor and state agency. As part of the agreement, FRA expects to fund infrastructure costs of such a railroad test bed. Additional evaluation of PTC technology will be conducted under the research and development budget.

FRA will also monitor and provide technical support to the PTC test bed which the union Pacific Railroad and the Burlington Northern Railroad are developing on their lines in the States of Oregon and Washington. This test bed will evaluate technical options for train location and communications in a challenging real-world environment.

The report to Congress details a wide range of additional measures that FRA will take to promote and facilitate introduction of PTC technology on the national rail system. Advancing this process is a principal FRA safety goal.

Question. On May 16, 1994, near Smithfield, North Carolina, an Amtrak assistant engineer was tragically killed, the chief engineer seriously injured, and 75 passengers injured, when a container from an adjacent freight train shifted into the path of the Amtrak train. Does FRA currently regulate locking procedures for freight? Are there any existing procedures or safety devices to detect misalignment of freight which would serve to prevent such tragic rail accidents?

Answer. FRA has no regulations on locking procedures as such. In general, the railroad industry uses the AAR standards for securing freight not classified as a hazardous material. Special securement instructions for trailers and containers are provided by the equipment owner (TTX Company, formerly "Trailer Train"). Of course, the Research and Special Programs Administration's Hazardous Materials Regulations, which are enforced by FRA in the rail mode, govern securement of hazardous materials.

Regarding securement of ordinary lading, FRA standards for inspection of freight cars by train crewmembers require that a crewmember (i) inspect a freight car wherever it is placed in a train and (ii) determine prior to departure of the train whether the car has any "object extending from side." Operating rules of the railroad also uniformly require train crews to inspect trains for unsafe conditions, including shifting loads. FRA regulations require that such operating rules be filed with FRA and that railroad employees be periodically instructed and tested on operating rules. FRA regulations further require railroads to train their employees and conduct inspections to ensure compliance with their operating rules.

We are not aware of any way to detect misalignment of freight other than by visual inspection. Securements for intermodal equipment have generally been designed to permit ready visual verification that the box or trailer is locked in place. However, a certain amount of training is necessary to ensure that personnel recognize the various types of hitches and other devices and the means by which their securement can be verified.

Working with TTX Company, rail labor, and the railroads, FRA has conducted an extensive 60-day special field survey of trailer and container securement at major intermodal terminals across the Nation. During the same period we have also reviewed in detail the accident history associated with this traffic. We will deliver a report with the results of our 60-day review of lading securement to the Secretary soon and will make appropriate recommendations at that time. Our findings and recommended actions will then be reported to the Committee.

Question. What studies are being undertaken or innovations developed to provide advanced warning to oncoming trains of breaches in bridge integrity or misalignments, such as that which was involved in the tragic Saraland, Alabama, accident on September 22, 1993, where 47 passengers [persons] were killed?

Answer. As a result of the accident, FRA analyzed present and potential technology to determine if a system to automatically warn of bridge trouble is practicable. The study centered around the potential use of sensor systems to monitor railroad bridge integrity. Included in the study are rough estimates of system costs and system reliability from the standpoint of detection of valid incidents, prevention of hazards induced by false alarms, and system maintainability.

The study is complete. The final report has been completed and will be widely distributed among the railroad industry and other interested parties.

The study shows that several different types of sensor systems can be used to detect breaches in bridge integrity (which can include damage to support structures, as well as displacement of the track structure). The choice of system can be based upon the characteristics of the structure to be protected, and the nature of possible threats. Some very simple systems can provide a high level of reliability, which is vital in railroad service.

Any type of sensor system would require a highly reliable power supply. It would also require a communication link to approaching trains, typically by means of an existing automatic signal and train control system, or by some other means of reliable communication on non-signalled railroad lines. The cost of the power supply and communication link depends more on the location of the bridge than on the type of sensor system used, and in most cases would be the major expense of an installation. On average, this cost would be significant.

FRA is exploring with Amtrak the possibility of installing one or two bridge integrity monitoring systems in the Northeast Corridor for evaluation of concepts. Successful demonstration of technology may indicate additional opportunities for addressing bridge locations at greatest risk from marine or highway traffic. FRA is also working with the Coast Guard to implement ways of more readily identifying bridges and their owners or operators, so that notification of bridge damage can be provided more reliably and promptly. The Coast Guard is independently evaluating a wide range of measures to reduce the likelihood of bridge structural damage from marine operations.

We believe that this mix of approaches will improve safety in the short term while permitting us to identify additional cost-effective approaches over time.

Question. What is FRA's assessment of the safety features involved with new fixed-guideway rail systems, such as System 21, which purportedly eliminate grade crossing accidents, head-on and sideswipe collisions? What federal financial support, if any, is justified in demonstrating and implementing such rail systems?

Answer. System 21, a fixed-guideway system, was independently analyzed by Battelle Laboratories using computer modeling in early 1990. The analysis validated the design for speeds of 60 mph and, at the time, gave strong indications that speeds in the order of 125 mph are attainable. FRA has not, by itself or through contracted effort, done a safety assessment on System 21, nor has FRA funded research and development on System 21.

One of the considerations in prioritizing the use of the limited public funds for safety analysis of new intercity fixed-guideway transportation systems is a realistic assessment of the schedule for implementing service of a new project, considering both the technology and the construction financing. In the interest of not being a source of critical delay to any of these projects, FRA policy is to develop technology-specific regulations to govern the operations of each technology.

There are two basic issues involved in completing a safety analysis of prospective new fixed-guideway technologies: (i) the availability and allocation of FRA resources

to respond as various competing proposals move forward; and (ii) the status of the project and thus the extent of safety analysis needed in the short term.

When proponents of a proposed system wish FRA to initiate a safety analysis, the FRA technical safety analysis staff would be interested in receiving, as a first step in preparation for that analysis, technical details on the guideway, the propulsion system, the control system, and the braking system of the proposed system. We have been working with the departments of transportation of various States regarding safety analyses for various proposed technologies. We have been provided with substantial information and have had the opportunity to begin the analysis of one of those technologies. For systems similar to systems in operation in other countries, FRA estimates that it would require one to two years to complete a safety analysis, assuming that the technical information is available and that the system is in a final configuration that can be tested. For the moment, System 21 appears better suited as a 1people-mover system, although the potential of attaining speeds of 125 mph may make it suitable for intercity transportation as well. As with all proponents of new technical systems, however, the FRA is interested in working in concert with them to complete system safety evaluations so that projects can move forward to implementation.

QUESTIONS ASKED BY SENATOR EXON AND ANSWERS THERETO BY MR. McLAUGHLIN

RULEMAKINGS

Question. Please elaborate on the subject areas in which such committees might be successful.

Answer. The logical response would seem to be that "consensus" rulemaking should lend itself to most, if not all situations. The problem with the approach is the animosity which exists between rail labor and management and the basic mistrust both parties have for FRA.

SAFETY TECHNOLOGIES

Question. What is RLEA's evaluation of the merits and the need for advanced train control systems? And what is the administration's rule in ensuring the implementation of reasonable and effective safety technologies?

Answer. Advanced train control or similar technologies are valuable tools to enhance the safety of railroad operations. Railroads, shippers, employees, and the general public will all benefit from the introduction of such safety equipment. In our opinion the administration has an obligation to every American to enhance the safety of rail operations. One cannot overlook the fact that more and more hazardous material moves across our Nation's infrastructure every day. Advance train control (positive separation) greatly enhances safety in a mode of transportation that moves hazardous material, in large quantities.

HOURS OF SERVICE

Question. Please provide the committee with RLEA's position on the FRA proposal to institute pilot projects that may depart from the Hours of Service Act (HSA)?

Answer. The answer to this question runs to our response on the rulemaking question. Basically, both rail labor and management mistrust FRA. In addition, the industry has concerns about levels of productivity while labor has concerns related to maintaining existing earnings levels. Any broad authority, granted FRA may run counter to the interests of the industry and/or its employees.

A cooperative effort involving management and rail labor has been ongoing since early 1992. There is some concern on the part of labor that the effort is mired down or lacks broad industry support when it comes to implementation of alternative strategies for addressing fatigue.

Question. RLEA has intimated that FRA currently has the authority to alter the Hours of Service Act without an express provision in the 1994 Rail Safety Act. Please elaborate on this point.

Answer. The FRA asserts authority to interpret the act and its numerous provisions based on its understanding of the "legislative intent" and what it believes the literal language means. One could certainly review past FRA interpretations of the act to determine how they may be revisited and, without changing the literal language of the HSA, significantly alter how it addresses fatigue related conditions.

Question. Please elaborate on the role that fatigue of members of the operating crew plays as a cause of train accidents.

Answer. Fatigued operating crews made poor decisions or no decisions whatsoever. Like your car when you fall asleep, a train with an operating crew that is asleep or in a reduced state of alertness is simply an accident looking for a place to happen. Sometimes we are lucky and the operator becomes alert before an accident occurs. Unfortunately, increased traffic densities on the railroads, higher speeds, and shortages of qualified employees to maintain adequate staffing levels all increase the likelihood of disaster. Fatigue has been proven to play a significant role in transportation disasters.

Question. Please tell the committee if RLEA believes this to be true and, if so, what actions are necessary to bring this project to a successful conclusion?

Answer. We would hesitate to say that no results have been produced. It would, however, be safe to say that "results," if any, are not openly shared with labor nor have any strategies for addressing fatigue, based on their studies, been proposed to labor by FRA.

PASSENGER CAR SAFETY STANDARDS

Answer. The answers to these questions would have to come from another RLEA member, more qualified than I to speak to these issues.

QUESTIONS ASKED BY SENATOR EXON AND ANSWERS THERETO BY MR. HARPER

REGULATORY REFORM

Question. According to prepared testimony, the Association of American Railroads (AAR) had concluded that regulation of the rail industry would be served better by using performance standards to regulate rather than using command and control rules. Please elaborate on the benefits of such performance standards.

Answer. AAR supports the regulatory principle adopted by President Clinton in Executive Order 12866 that agencies are to "specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt." (58 Fed. Reg. 51,735, 51,736.)

The benefits of performance standards result from the fact that such standards permit flexibility, innovation, and advantageous use of technology by regulated businesses in achieving safer operations. Command and control rules, on the other hand, lock in existing technology and outmoded methods. Such rules mandate the design of a particular system without giving assurance that the system will perform as intended. The cause of safety benefits from performance standards, since they do give assurance that the system will perform as intended.

As examples, in FRA's pending rulemaking on track, AAR has argued for performance standards permitting the use of track geometry vehicles and gauge restraint measuring vehicles. The standards would substitute for the current detailed regulatory requirements as to visual inspection, crossties, spikes and the like. Since it is the strength of the track that matters, and not the condition of an individual crosstie, spike, or other component, performance standards based on the use of detection vehicles which measure system strength would enhance safety.

SAFETY TECHNOLOGIES

Question. Please evaluate the merits and the need for advanced train control systems? According to AAR, what is the Administration's role in ensuring the implementation of reasonable and effective safety technologies?

Question. What is AAR's view of the feasibility of positive train separation and the time table for its implementation? What funding mechanism should be used for implementing this technology?

Answer. The component of advanced train control systems that could reduce the risk of train collisions and overspeed derailments is called Positive Train Separation or PTS. As FRA correctly concluded in its July 1994 report to Congress ("Railroad communications and Train Control"), the safety benefits of PTS at this time would not cover the nearly \$1 billion in costs of installation. But, although the cost of PTS cannot now be justified, the railroad industry is nevertheless committed to making a determination whether PTS can be a feasible technology for the future. One aspect of this commitment is the recently announced PTS pilot project involving Burlington Northern and Union Pacific. This joint project will test the feasibility of electronic train monitoring and control systems.

The government's role in ensuring implementation of reasonable and effective safety technologies can best be discharged by using performance standards to set safety objectives, as directed by President Clinton in Executive Order 12866, dis-

cussed earlier. Performance standards do not preselect any particular technology to achieve goals and, therefore, do not inhibit technological innovation.

The industry has looked at many technologies to provide PTS. The lowest cost alternative is still in the developmental stage. The BN/UP pilot will extend over the next three years and should provide a base for determining the feasibility of the low cost alternative. With the results of that pilot program and other testing on the two Canadian Railroads, the railroad industry will then be better able to make judgments about implementation of PTS.

To date the railroads have funded PTS development privately. AAR is not aware of any public source of funds. There has not been any consideration given to other funding mechanisms.

HOURS OF SERVICE

Question. Both the Federal Railroad Administration (FRA) and the National Transportation Safety Board (NTSB) attribute many human error rail accidents to employee fatigue. Would you give the committee AIR's view on the FRA proposal to institute pilot projects that may depart from the Hours of Service Act (HSA)? Specifically, are there areas in which rail labor and rail management are cooperating in studying the impact on safety of the provisions of HSA?

Answer. FRA proposes that it be given the authority to waive provisions in HSA upon a joint request from management and labor. AAR does not object to granting FRA such power, provided joint consent is present in all cases.

In its 1993 report on "Railroad Safety—Human Factor Accidents and Issues Affecting Engineer Work Schedules," the General Accounting Office (GAO) found that accidents caused by human factors had lessened in number and severity since 1989. Desiring continuing improvement and believing that effective solutions require an understanding of the underlying actual facts, railroad management and labor representatives have formed a Work/Rest Review Task Force. Preliminary work has been completed to compare work schedules of engineers who have experienced an "incident" (accident, injury, or rules violation) with incident-free engineers. The Task Force meets on an ongoing basis.

GRADE-CROSSING SAFETY

Question. The rail industry's Grade-Crossing Policy Agenda states that the federal government should fund a national grade-crossing safety education and public awareness program. Since the value of any such program would be shared equally by all, shouldn't the cost also be shared?

Answer. Education, engineering, and enforcement have long been the three key elements of transportation safety programs, particularly programs directed toward highway safety problems, such as grade crossings. Over twenty years ago, in July 1973, a subcommittee of the House Committee on Public Works reached the following conclusion:

Whose responsibility is it to see that maximum safety is incorporated into our motor vehicle transportation system? On this, the subcommittee is adamant. It is the responsibility of government, and specifically those agencies that, by law, have been given that mandate.

Clearly, public agencies with essential expertise and resources, rather than private railroads, are appropriate to provide much needed driver education programs. And, despite this obvious and historical assignment of responsibility to public agencies, the railroads continue to provide almost all resources now utilized by Operation Lifesaver (OL).

In addition to financially contributing to the National Operation Lifesaver Program, the railroads contribute essentially all funding for the 49 individual state OL programs, offer a vast amount of in-kind services, such as the printing and production of materials, and provide extensive use of railroad personnel to make crossing safety presentations to hundreds of schools, civic organizations, and other interested groups.

Railroads have important responsibilities in the area of grade crossing safety. Railroads are responsible for train operations, the maintenance and operation of crossing warning devices, and sight-distance obstructions on railroad right-of-way. It is estimated that railroads today spend at least \$200 million a year on capital improvements and maintenance in the grade crossing area. Government also has crossing safety responsibilities, and among those is driver education. It is appropriate that government fulfill that responsibility through a vigorous and effective Operation Lifesaver campaign designed to dramatically illustrate the life-or-death consequences of motorists' behavior at grade crossings.

PASSENGER CAR SAFETY STANDARDS

Question. Does AAR have an opinion regarding NTSB's view that safety standards for commuter train passenger cars need to be established?

Answer. AAR does not have an opinion on NTSB's view, recognizing that the best sources for industry information about commuter train passenger cars are Amtrak and commuter railroads.

TECHNICAL AMENDMENT

Question. Is AAR's objection to FRA's request for an amendment to allow it to order employees to stop performing service based on that employee's violation of applicable safety laws based on the view that the present penalties in FRA's arsenal are sufficient? What remedies are currently available to FRA? Does FRA have sufficient enforcement personnel, to provide a sufficient margin of safety?

Answer. AAR opposition is based on the absence of any showing that existing penalties are not sufficient. FRA currently has full authority to disqualify an individual for violation of a "rule, regulation, order, or standard" under 45 U.S.C. § 438(f). Most provisions of the safety statutes are mirrored by specific FRA "rule, regulation, order, or standard." Although there are not any FRA rules mirroring HSA (because FRA does not have rulemaking authority under HSA), any person willfully violating a provision of HSA is subject to a civil penalty in an amount between \$500 and \$10,000, and up to \$20,000 for certain gross violations. (45 U.S.C. § 64a.) AAR's point is this: before granting any agency the power to throw an individual off the job, Congress should require more than a bare bones request for legislation. Congress should demand a showing of real need, based on the inadequacy of existing remedies.

Safety in the railroad industry is essentially assured by the railroads themselves whose every interest requires safe operations. FRA at best serves to check compliance with applicable laws, and it is adequately staffed for that purpose. As noted earlier, conversion to performance-based regulation would make better use of all industry resources.

 QUESTIONS ASKED BY SENATOR EXON AND ANSWERS THERETO BY MR. VOGT

SIGNALING DEVICES

Question. Please explain to the Committee the significance of signalized rail corridors, particularly those using cab signals, block signals, and centralized traffic control systems.

Answer. Signalized rail corridors currently use a variety of signal systems to provide for the safe movement of trains. Block signal territory use the train axles to short out or shunt the rails. The presence of a train is displayed by signal aspects behind and ahead of the train. A train following another train in block signal territory would receive signals telling the engineer if the block ahead is occupied. Block signals are usually isolated from the rest of the railroad system in that there is usually no communication of train location or block occupancy to a central control center.

Some railroads use a system that allows signals to be continuously displayed in the cab of the locomotive. This type of system is known as a cab signal system. The signal aspects are transmitted through the rail and picked up by the locomotive through an inductive coil located on the locomotive. Cab signals are used on Amtrak's Northeast Corridor. One of the advantages of cab signals are that the locomotive engineer continually has the signal displayed in the cab. Missing a signal due to poor visibility is not a problem. Since the signal is decoded in the locomotive, advanced features such as an automatic train stop can be incorporated in the cab signal system.

Centralized Traffic Control (CTC) is an advanced type of train control that is being increasingly used by the larger railroads. CTC allows a dispatcher at a remote location to line up a route for the train to follow. All of the switches and signals are automatically thrown to route the train to its ultimate destination. Computers monitor the actions of the dispatchers and make sure that two trains are not in conflict with each other. The computer will not allow the dispatcher to line two trains on opposing routes.

Question. Without prematurely discussing any findings of the Burlington Northern train derailments just last week in Seneca, Nebraska, where two crewmen were killed in a centralized signaling corridor, please explain to the committee how this technology ideally would prevent such accidents?

Answer. The Seneca, Nebraska accident occurred in Centralized Traffic Control (CTC) territory. CTC systems automatically set switches, set signals, and route trains from a remote control center. CTC systems use both a dispatcher and a computer to ensure safe routing of trains. The dispatcher decides what route the train should take and requests the route from the computer. The computer will only allow the route to be set up if it does not conflict with other train movements already programmed.

CTC systems work very well as long as there is no error in the manner the signals are displayed and the operating crews obey the signals. If the operating crew misses a signal or fails to stop or slow their train in response to a signal then tragic accidents like Seneca, Nebraska can occur.

Question. Please detail for the Committee how advanced train control systems would serve to reduce human-error causes of rail accidents.

Answer. The advanced train control systems that are currently being discussed and developed in the United States will have the ability to accurately locate each train and intervene in the operation of the train if a dangerous situation is encountered. For example, if the train is approaching a stop signal and the operating crew has not taken steps to reduce the speed of the train, then the advanced train control system would take over and apply the train brakes automatically. In this way, advanced train control systems would back up the human element and take over in the event that a crewman was inattentive, asleep, ill, or otherwise incapacitated.

Question. What type of safety technologies would the National Transportation Safety Board (NTSB) recommend to prevent tragic accidents such as that which occurred in Smithfield, North Carolina, on May 17, 1994, where an Amtrak assistant engineer was killed when a container from an adjacent freight train shifted into the path of the Amtrak train?

Answer. The Smithfield, North Carolina accident is still under investigation. The Safety Board intends to discuss in the report how technology could be used to detect shifted or unsecured loads. Currently, however, we are still gathering information on what types of technology may be appropriate.

We will be looking for information on this subject from the Association of American Railroads (AAR). Representatives of the AAR are scheduled to appear at the Safety Board's depositions scheduled for September 1 and 2 in Orlando, Florida. They will be asked to comment on technology solutions to this problem.

PASSENGER CAR SAFETY STANDARDS

Question. What specific safety standards does NTSB recommend that the Federal Railroad Administration undertake to enhance the safety features of our passenger rail cars in commuter rail and on Amtrak?

Answer. The Safety Board's intent in asking for passenger car standards is to provide a consistent level of safety no matter if the cars are operating on a commuter line or in Amtrak service. Many of the Safety Board's areas of concern have been addressed with recommendations to Amtrak. These recommendations involved luggage retention devices, seat locks, securement of interior equipment, emergency exits, and emergency lighting to name a few. It is the hope of the Safety Board that these types of requirements could be applied universally to all types of passenger equipment.

There are other areas that the Safety Board is concerned with that we will continue to address in the future. Some of these areas are crashworthiness in corner and side collisions and flammability of car construction materials. These issues will require attention by all car purchasers including Amtrak, commuter rail, and rapid transit.

TRACK SAFETY STANDARDS

Question. Please discuss for the Committee, NTSB's recommendations on needed improvements to track inspection standards, especially in the light of rail accidents that may have occurred due to faulty installation and maintenance of continuous welded rail.

Answer. The Federal Railroad Administration publishes the regulations on Track Safety Standards in 49 CFR 213. The regulations are used as minimum standards for the safe operation of trains over six classes of track. The FRA track safety standards are very important to the industry and have even been adopted by the Canada for use on their railroads.

The FRA Track Safety Standards by themselves, however, do not automatically ensure safe operation of a railroad. One reason this is true is that the track safety standards do not contain regulations or specific requirements for all types of rail op-

erations. For example, the track safety standards do not contain requirements for the installation and maintenance of continuous welded rail.

In 1982, the FRA made major changes to the Track Safety Standards. On March 29, 1982, the Safety Board sent a letter to the FRA in response to a Notice of Proposed Rule Making (NPRM), "Track Safety Standards; Miscellaneous Amendments", Docket No. RST-3, No.3, which was published at 47 FR 7275 on February 18, 1982. A portion of the letter addressed the proposal to drop Section 213. 119, Continuous Welded Rail from the FRA track safety standards which read:

49 CFR Part 213. 119 Continuous welded rail.

(a) When continuous welded rail is being installed, it must be installed at, or adjusted for, a rail temperature range that should not result in compressive or tensile forces that will produce lateral displacement of the track, or pulling apart of rail ends or welds.

(b) After continuous welded rail has been installed, it should not be disturbed at rail temperatures higher than its installation or adjusted installation temperature.

The Safety Board responded in part:

This section should be retained, strengthened, and enforced because rail temperature is an important safety consideration. Even the subject rulemaking proposal acknowledges the importance of controlling thermal stress in continuous welded rail; but fails to propose action for accomplishing needed controls.

The FRA removed the continuous welded rail section in 1982 because it believed that the individual railroads already had adequate rules and practices in place to ensure a safe continuous welded rail track structure, and that since there was no accurate means to measure longitudinal rail force, such regulation was unenforceable. Based on this argument, all regulations directly related to continuous welded rail were removed from the track safety standard.

About 1:26 p.m., CDT, on April 23, 1990, eastbound National Railroad Passenger Corporation (Amtrak) train No. 6, the California Zephyr, derailed at Batavia, Iowa, while operating on the Burlington Northern Railroad. One passenger received serious injuries; 10 crewmembers and 75 passengers received minor injuries. The estimated damage was \$1,835,000.

The National Transportation Safety Board determined that the probable cause of the accident was improper rail installation during cold weather operations resulting from ineffective training programs, inadequate supervisory oversight and quality control measures, and an ineffective data collection system. Also causal to the accident was the failure of Burlington Northern procedures to require that crews readjust/destress continuous welded rail after the track had been disturbed, which resulted in a track buckle under Amtrak train No. 6.

In the investigation of the Batavia, Iowa accident, the Safety Board re-addressed the importance of temperature control of continuous welded rail and its ability to absorb the dynamic forces of trains in order that railroad operations may be conducted safely. Although much information has been developed from the research of the behavior of continuous welded rail, much of the present knowledge about track structure capabilities and limitations is still empirical because of the wide variety of factors that affect neutral rail temperature such as ambient temperature, geographic location, track geometry, maintenance, and rail traffic. Standards relating to track structure should include a safety margin sufficient to reflect the inability to predict, with reasonable accuracy, the effects of operating conditions upon safety. The Safety Board believes that the FRA should reinstate and expand Section 213. 119 to ensure proper temperature control procedures for installing and maintaining continuous welded rail.

GRADE CROSSING

Question. What general improvements to grade crossings does NTSB recommend including traffic laws and technological advances?

Answer. Grade Crossing accident fatalities make up about half of the railroad related fatalities in our country. The Safety Board feels that more emphasis should be concentrated on closing redundant crossings and making innovative improvements to the remaining crossings. New technology including intrusion warnings on four quadrant gates, photo enforcement of grade crossing regulations, remote control whistles located at the crossing are a few of the many new technology based ideas that may help reduce the number of deaths at grade crossings.

The Safety Board supports the work of the Department of Transportation, the Federal Railroad Administration and some individual companies and agencies that are conducting or sponsoring research and demonstration projects. The Los Angeles County Transportation Commission (LACTC) has sponsored its own research

projects to determine the effectiveness of certain types of grade crossing protection technology that could help it solve a serious grade crossing problem on the Blue Line light rail line. The LACTC has set up a test program to determine the effectiveness of photo enforcement systems at grade crossings which take pictures of cars driving around lowered gates at grade crossings. Tickets are issued based on the photograph and mailed to the registered owner(s) of the vehicle.

The LACTC and the Department of Transportation are also looking at four quadrant gates as a means of reducing grade crossing collisions. Four quadrant gates completely block off both lanes of traffic on both sides of the grade crossing.

PREPARED STATEMENT OF WILLIAM E. LOFTUS, PRESIDENT, THE AMERICAN SHORT LINE RAILROAD ASSOCIATION

Mr. Chairman, I am William E. Loftus, President of The American Short Line Railroad Association (ASLRA). I appreciate the opportunity to present the views of the Association's 412 short line and regional railroad members on the Federal Railroad Safety Authorization Act of 1994.

ASLRA generally supports the Administration's bill to reauthorize funding for the Federal Railroad Administration's (FRA) important safety mission. The nation's smaller railroads have a very positive safety story to tell. Major safety improvements have been made in recent years, particularly in the training of employees and managers in Federal safety standards and industry safety practices. FRA has provided consistent support in this training process. For this reason, I support the bill's approach of reauthorizing the FRA safety program, for four years, without numerous extraneous, additional provisions.

FRA already has a large number of important rulemakings underway; 41 at last count, and it is appropriate that this reauthorization process should not mandate significant additional regulatory responsibilities for the agency at this time. Also, I think it is appropriate to note the openness policy instituted by the current administrator, Jolene Molitoris. The agency has held at least four round table discussions of key safety issues with representatives of railroad management and employees. These sessions hold the promise of moving away from the adversarial nature of FRA rulemaking that has been the norm in recent years.

It is also noteworthy that FRA held its first regulatory/negotiating session on June 3, on the subject of track worker safety. ASLRA joined with the Association of American Railroads and the involved labor organizations, under the guidance of Administrator Molitoris and her staff, to begin a process that will likely bring meaningful and timely actions to deal with the problem of track and signal workers being struck by moving trains and on-track equipment. All parties involved expressed their full commitment to the process.

Therefore, while some may seek legislative actions beyond the Administration's bill, I would argue that there is a much more workable procedure underway and it should be permitted to flourish without adding to the FRA regulatory agenda.

The Administration's reauthorization bill includes a provision which will allow FRA to approve pilot projects under the Hours of Service Act, by permitting waiver of the Act's requirements in order to test alternative solutions. These projects could be undertaken only with the joint consent of rail labor and rail management. ASLRA supports this concept as an appropriate area of cooperation between rail employees and managers. We expect FRA to be evenhanded in its implementation of this innovative procedure.

Although the work/sleep cycle issues which are apparently behind this provision of the bill are not as significant an issue for small railroads as for larger ones, there may be other Hours of Service Act issues which would be appropriate for a pilot project on a smaller railroad. As I read the Administration's bill, it would permit labor and management on a small railroad to approach FRA with a project involving an area other than work/sleep cycles, and that their request would receive full consideration.

In Section 5, the bill would give the Secretary of Transportation the ability to remove an individual from performing safety-sensitive service for violation of a federal rail safety statute other than the Hazardous Materials Transportation Act. I have serious concern about this broad provision. Rail safety is of paramount importance. However, some violations of the federal rail safety statutes can result from inadvertent recordkeeping errors. Indeed, ASLRA members have been fined on occasion for record keeping violations, in cases in which there was no serious or deliberate violation of the statute or regulation other than the failure to do all of the required paperwork. I do not mean to minimize the importance of good recordkeeping and accurate Federal reporting. However, it seems unduly harsh that a rail manager could

potentially be removed from safety-sensitive service or fined because of a record-keeping error.

The Administration's legislation would change the present annual report which FRA files with the Congress to an every other year event. I have no objection to this change. I understand that the data and statistics which FRA compiles would continue to be made available to the rail industry on a timely basis.

Finally, on the issue of grade crossing safety, I am pleased to note that the Administration announced its broad-based program to deal with this critical public safety issue through administrative and legislative actions. Earlier Senator Danforth, joined by other members of the Committee, introduced a comprehensive bill to improve grade crossing safety. The Association strongly supports the attention being given to reducing accidents, fatalities and injuries at public grade crossings and pledge the full cooperation of our member railroads. We would like to provide additional comments on the Administration's bill when appropriate.

In summary, The American Short Line Railroad Association respectfully urges the Subcommittee to support reauthorization of the Federal Railroad Safety Act for a four year period with the inclusion of the provision to permit experimentation in the Hours of Service area.

PREPARED STATEMENT OF G. THOMAS DuBOSE, PRESIDENT, UNITED TRANSPORTATION UNION

My name is G. Thomas DuBose. I am President of the United Transportation Union (UTU). I am pleased to have this opportunity to present our views on federal railroad safety laws and regulations.

Let me begin by stating that UTU has always been committed to ridding the workplace of safety and health hazards. Our organization believes that much can be and should be done to curtail injury and death in the rail industry. Protecting the safety and well-being of our members through the pursuit of stronger safety laws and regulations is among the most important policy missions of UTU. It is with that mission in mind that we submit to this Subcommittee our views on policy changes needed to safeguard rail employees from unnecessary safety and health risks.

I commend you Mr. Chairman, as well as your colleagues on this Subcommittee, for your unyielding commitment over the years to improving safety in the rail industry. As you are well aware, the reauthorization of federal rail safety programs presents an opportunity to address those safety problems that continue to plague the industry, and in many instances, the communities through which trains travel for the delivery of freight and passengers.

HOURS OF SERVICE ACT

The Hours of Service Act is in need of reforms. UTU makes the following recommendations:

- *8 hours calling time.* UTU believes Congress must address an issue which remains unresolved—the amount of undisturbed rest a worker is entitled under the Act. We submit that under existing law an employee is entitled to eight or 10 hours of undisturbed rest, depending upon how many hours the person worked before the rest period begins.

Despite the fact that the intent of Congress, as reflected in the legislative history of Congress' 1969 amendments to the Act, makes it clear that rest should be undisturbed, it is common practice for railroads to call employees 2-3 hours before duty time is scheduled to begin; hence, employees' rest time is interrupted which contributes to sleep deprivation and chronic fatigue. Moreover, attempts to seek a ruling from the Federal Railroad Administration, have thus far fallen on deaf ears in spite of compelling evidence linking sleep deprivation and chronic exhaustion to accidents. On several occasions the National Transportation Safety Board (NTSB) has listed crew fatigue as a contributing cause of an accident. James L. Kolstad, then chairman of the NTSB, told the House Transportation Appropriations Subcommittee in 1992 that "Crew member fatigue has been a Safety Board concern in all modes of transportation, and it has been placed on our 'Most Wanted' list of safety issues * * * we will continue to push for safety improvements in this area."

UTU believes Congress must mandate that employers give employees eight hours notice before requiring them to report to duty. A definitive policy directive on this issue from Congress will begin to address the serious safety implications of chronic exhaustion among operating crew.

- *Safety-sensitive supervisory personnel should be covered under the Act.* A problem which continues to go unaddressed is the lack of a clear mandate as to whether a chief and assistant train dispatcher, night chief train dispatcher and other similar

employees are covered under section 3(a) of the Act. We believe such employees should be covered by the Act because their duties are safety-sensitive in nature and are vital to the safe movement of trains. We urge Congress to make it clear that these workers are to be covered under this important safety and health law.

- *Coverage of employees who transport crews to and from duty assignments.* Another important issue is the lack of coverage under the Act for workers who transport crews to and from duty assignments. Driver fatigue, due to long hours behind the wheel and other related problems, has contributed to a number of accidents that have jeopardized rail employees.

A number of state and local government agencies have identified this as a serious safety problem. In Nebraska, for example, the Public Service Commission responded to this problem by issuing a directive prohibiting drivers who transport railroad crews from operating a vehicle for more than 12 hours during any 24-hour period. While state actions are encouraging, UTU believes this problem must be addressed through the adoption of a national standard that clearly covers all motor carriers engaged in this transport service including companies that contract with the railroads.

- *Workers should not work more than six consecutive days without a day off.* Another issue related to worker fatigue is the number of consecutive days an employer can assign crews. As mentioned above, depriving workers adequate rest has contributed directly to railroad accidents. But unfortunately efforts to date to address this issue have not succeeded. We thus urge Congress to correct a problem that contributes both to degrading the quality of railroad jobs and safety in the industry.

- *Deadhead transportation should be counted as on-time duty.* Also related to a worker's hours of service is the industry practice of not counting so-called "deadhead" transportation as an employee's total hours on-duty. This has only contributed further to the problems of chronic fatigue and irregular work schedules. The adoption by Congress of a measure that clearly requires deadhead time to be tabulated as part of total hours of service would contribute to improving safety on the railroads.

OSHA-FRA GAP

As you are well aware, Congress is undertaking the important legislative task of reforming the Occupational Safety and Health Act—OSHA—for the first time in more than 20 years. While it is not yet clear whether that effort will result in the enactment of comprehensive OSHA reform legislation, UTU is acutely aware of a problem in need of a solution: the gap in coverage between OSHA and FRA regulations.

The problem surrounds a unique jurisdictional scheme between the Occupational Safety and Health Administration and the FRA (as well as the other Department of Transportation modal administrations). Unfortunately, the fact that FRA asserts jurisdiction over railroad safety and health enforcement has resulted in a gap in coverage that occurs when a particular working condition or hazard could readily be addressed by existing OSHA standards but is not because FRA standards are either inadequate or non-existent. Regardless of the merits of having more than one government agency charged with regulating workplace safety, it is clear that Congress never intended workers to fall through the cracks, as they have in the transportation sector.

An example of this safety gap involves the working environment in a locomotive. Exposure to diesel fumes has been a concern of UTU for many years. Formal complaints have been submitted both to FRA and OSHA. Unfortunately, OSHA defers to FRA and FRA has done little or nothing to address this issue. Despite the requirement by Congress in 1992 that FRA study this issue, the problem has yet to be corrected. This gap in coverage for rail workers has also manifested itself in major incidents in which rail workers and non-rail workers were exposed to serious incidents involving hazardous and toxic materials but the non-rail and rail employees were not treated the same when it came to the investigation and eventual citation of safety violations.

It is vitally important for Congress to adopt a legislative measure that undeniably closes this safety gap. Not only is this problem an unintended result of past congressional action in the area of occupational safety and health, it is exposing thousands of rail workers to potentially lethal workplace hazards that often go unchecked because of an ineffective jurisdictional scheme between two government agencies.

NOISE ABATEMENT REGULATIONS

Another issue of importance to UTU is the need to have as a minimum the imposition of OSHA standards governing noise abatement. It is well known that pro-

longed exposure to high levels of noise can lead to permanent hearing loss. In the rail industry, where workers are exposed to noise levels exceeding 100 dba, hearing loss has become pervasive. And of course, once noise-induced hearing loss is detected, normal hearing cannot be restored.

Thousands of hearing loss claims have been brought seeking damages for employees. In 1990, for example, some 28,000 claims and suits were filed by and on behalf of employees suffering from noise-induced hearing loss. This mounting caseload is showing no signs of abatement because, in fact, the carriers have concluded that it is cheaper to pay the claims than to take the necessary corrective actions. A congressional mandate requiring the promulgation of proper FRA regulations in this area is the only effective means to address a serious problem that threatens the health and safety of UTU members and all rail employees.

HAZMAT CAR PLACEMENT AND OVERALL TRAIN MAKE-UP

Two issues of particular importance is the general make-up of cars in trains and specifically, the placement of tank cars placarded to transport hazardous materials regulations. First, we believe train make-up is an important issue that continues to elude proper regulatory scrutiny. Improper distribution of loaded and empty cars has been a source of numerous accidents. Today, the only regulation of train make-up comes from the railroads themselves. And we believe the industry is failing to adhere to sufficient standards of train makeup.

The statistics of one railroad's accidents in 1992 revealed that 20 out of 70 accidents (or 29 percent) had train make-up as a major contributing cause. Because of the improper distribution of weight, braking can often cause a "slingshot" effect between the lighter and heavier cars. This effect, referred to as "buffing" or "slack action," makes braking extremely difficult and, as in the tragic accident in Dunsmuir, Calif., can lead to a catastrophe. This problem is very pervasive in trains where loaded cars are placed behind a string of empty cars. This problem is masked in several Cause Codes (i.e., slack action, brake valve malfunction, excessive lateral drawbar force on a curve, interaction of lateral/vertical forces, etc.) which on an annualized basis has resulted in the under-reporting of accidents caused by the true culprit: train make-up. Without getting into a debate over the causes of accidents and the reporting of those causes, it is clear that train make-up has led to far too many accidents and, therefore, should be covered by strong regulatory directives.

The growing volume of hazardous materials transport by rail is a problem not unrelated to the above discussed issue of train make-up. It is UTU's position that placarded tank cars should be prohibited from being placed at the rear end of trains. It is a position that should be embraced by the industry but to date some carriers disregard the necessity to place a placarded car elsewhere in the train consist. In light of compelling evidence in support of UTU's position, we urge the Subcommittee to address the broad issue of train makeup and the related concern surrounding the ill advised placement of placarded tank cars at the rear of trains.

RESPONSE TO HAZARDOUS MATERIALS SPILL DERAILEMENTS

When derailments occur involving hazardous materials we believe employees should be protected from having to respond to such incidences until such time as a properly authorized, qualified determination has been made concerning the nature of the material spilled as well as the necessary safeguards needed to protect the crews from dangerous exposure. An eight year old petition has been sitting unanswered at the DOT's Research and Special Programs Administration (RSPA) seeking protections for workers.

It is commonplace for several crafts of rail employees to encounter hazardous materials spills from rail cars. Typically, these workers are required to clean-up spills, or inspect cars suspected of leakage. It is not unusual, as in the Dunsmuir, Calif. spill, for workers to respond to such spills without wearing protective clothing and without having the necessary training to understand the deadly effects of exposure to hazardous and toxic materials.

UTU urges this Subcommittee to mandate the proper regulations to safeguard against catastrophes such as Saraland, Alabama from occurring in the future.

PASSENGER TRAIN SAFETY STANDARDS

UTU and all of rail labor has been on record calling for the FRA to impose passenger car safety standards. To date FRA has not issued a rulemaking to address this issue. There are a multitude of concerns ranging from inadequate lighting during evacuations to the structural integrity of passenger cars that must be addressed to curtail injury and death during and following passenger train accidents.

Despite repeated findings by the NTSB that have identifying passenger rail safety hazards in need of corrective action, FRA remains silent on this issue. Let me add, however, that under the new regime at FRA we are hopeful to see the emergence of a new attitude in this area, particularly in the wake of several passenger rail wrecks in the past 18 months.

REPEAL OF CERTAIN RULEMAKING FUNCTIONS DELEGATED TO THE INDUSTRY

Our union has a particular problem with the delegation of certain standards-making functions to the Association of American Railroads. When DOT was created in 1966 it assumed the Interstate Commerce Commission jurisdiction over tank cars. RSPA of DOT handles tank car rules and regulations must be addressed due to the growing volume of hazardous materials being transported via rail.

BRIDGE STANDARDS

Since UTU members are a part of rail operating crews we face the real dangers associated with constantly traveling over what are often poorly constructed, maintained and inspected railroad bridges. The Saraland, Alabama tragedy on September 22, 1993 underscores the need to adopt strong federal standards governing the construction, maintenance and inspection of railroad bridges, inclusive of signal devices or warning systems designed to detect displacement or misalignment of bridges, track and structures.

It is painfully apparent that had the bridge in Saraland been properly maintained and inspected in accordance with appropriate regulations, the structural components of the bridge would have been able to withstand the blow and thus reduce the chance of a catastrophe occurring. This is not the first, nor the last, accident that could have been prevented with the employment of adequate bridge warning systems. The technology to address this problem already exists and is deployed on many railroads around the country to detect problems such as broken rails, malfunctioning track switches, and high water and other dangers. It could just as easily be applied to bridge warning systems at a cost of less than \$1,000 per bridge.

The authority of overseeing tank car design, however, has been delegated to the AAR. In essence, before a new tank car design is introduced into the industry, it must receive the approval of the AAR Tank Car Committee. The car manufacturer must even apply to AAR—a professional association—for approval of the design, materials and construction.

The committee is comprised of 13 members from the railroads, tank car builders and shippers and several shippers groups. Typically, the DOT will approve any recommendations from this standing committee of the AAR. The NTSB has found that this committee is totally dominated by the industry and provides little opportunity for public comment on issues that touch every community through which freight trains travel. The NTSB has stated:

* * * the Tank Car Committee provided a great opportunity for members representing chemical manufacturers and tank car owners to control many key decisions affecting transportation safety and provided little or no opportunity to specifically identify or consider public safety concerns.

The FRA also defers to AAR on the issue of periodic testing of brake components. Current regulations authorize the industry to set the time limits within which certain brake components are tested and inspected. In recent history, AAR has deleted any time requirements for testing these brake components. Since evidence shows that defective brake components are a major cause of rail accidents, this system of self-regulation should be repealed.

We believe it is bad policy for our government to relegate such important safety regulatory functions to the industry itself. Absent a proper watchdog role for the government, it is impossible to assure that the need to properly regulate tank car safety and brake component testing will not be cast aside by the industry's economic interests.

STATE/LOCAL DRUG AND ALCOHOL TESTING WITHOUT PROBABLE CAUSE

Notwithstanding any other law to the contrary, it is UTU's view that whenever a state or local jurisdiction conducts, without probable cause, a drug or alcohol test after a grade crossing accident, the employees tested should be entitled to seek monetary damages from the testing entity. This has become a serious problem dating back to the inception of FRA's testing regulations.

It is common for local or state authorities to remove crews from service for a drug or alcohol test, even if there is no reasonable suspicion that any crew member was under the influence of alcohol or a controlled substance. Although the federal regulations preempt state or local governments from testing railroad workers (except to

enforce criminal laws), grade crossing accidents continue to trigger a drug or alcohol test at the local level.

We believe fairness dictates that Congress provide an adequate remedy for rail employees illegally tested. Such a measure would send a strong signal that Congress is intolerant to types of testing that is specifically disallowed under the sweeping Department of Transportation mandatory drug and alcohol testing rules.

IMPROVING FRA RULEMAKING PROCEDURES

UTU has always sought ways in which procedures used during rulemakings at FRA could be improved so as to expedite the completion of important proceedings before the agency. One method is to institute the use of negotiated rulemaking committees with all interested parties at the table. As such, a consensus reached by all affected interests would result in expedited rulemakings that address important problems in a timely and efficient manner.

UTU is pleased that FRA Administrator Jolene Molitoris is using this approach on experimental basis in a proceeding involving the protection of employees working on or near tracks. Congress has already addressed this issue in two statutes, the Federal Advisory Committee Act and the Negotiated Rulemaking Act, both of which authorize a federal agency to utilize exactly the types of procedures we are recommending here. In light of the inordinate amount of time it takes to complete a rulemaking, we believe this approach should be used on a more regular basis as it encourages industry consensus while reinforcing the need to complete proceedings on a more expedited basis.

ON-BOARD WORKING RADIO REQUIREMENTS

Despite some eight years of deliberations over the issue of radio communications on the nation's railroads, FRA continues to drag its feet on the issue of mandating working radios on all manned moving equipment—from locomotives to maintenance of way equipment. Despite the fact that our economy, and in fact the rail industry, is on the cutting edge of state of the art technologies, we continue to hear excuses on why the industry cannot invest in a new communications system.

Industry procrastination, and FRA inaction, make it clear that Congress must step in and, at the very least, require a working radio on every locomotive. Current regulation only requires that a radio be in working order, if a locomotive happens to be equipped with one. Clearly, the whole issue of communications lies at the center of the debate over positive train separation requirements. If an effective communications system had been in place, for example, on June 8, 1994, the collision on that day involving three Burlington Northern trains could have been avoided.

It makes little sense to run a sophisticated nationwide freight rail transportation system without taking advantage of safety communications technologies that can, among other things, automatically stop a train if an engineer becomes incapacitated, if the speed limit is exceeded, or if the train doesn't respond to signals. But to make the system work in a safe and efficient manner, congress must at least require a working radio on any manned moving equipment.

REMOTE CONTROL LOCOMOTIVES

Four small railroads are beginning to utilize remote controls to operate locomotives. This device, which is about half the size of a car battery, is equipped with various knobs, levers and buttons. It has the ability to move locomotives while the operator remains on the ground beside the engine. Some of the operations require the employee to stand on the front of the engine, which is extremely dangerous.

Clearly, the rationale behind using remote control locomotives is to reduce crew sizes. This is an inadequate reason to allow the use of a technology that poses serious safety hazards. Moreover, we are concerned there may be electromagnetic exposure caused by transmitter emissions.

REMOVING SHOP TAGS FROM CARS OR LOCOMOTIVES

As a result of FRA hearings conducted last year concerning the power brake issue, it was learned that carriers frequently attempt to evade car and locomotive repair costs by removing so-called "shop tags" which specify the nature of defects discovered and direct that the equipment be sent to a repair track. Congress has made it a federal violation to tamper with equipment. UTU believes removal of a shop tag is equally as dangerous, and thus should be prohibited by the same explicit congressional directive.

RENEWAL OF CARRIER WAIVER REQUESTS

Railroads seek some 200-300 regulatory waivers from FRA annually. The records over the years show that a vast majority of these waiver petitions receive FRA approval.

It is unclear to what degree FRA is equipped to know at a given time how many regulatory waivers are in effect. UTU, therefore, believes FRA should be required to re-examine every three years all waiver petitions it has granted. Such a re-examination should entail the submission of documentation by the railroad justifying the need for continuation of a particular waiver. Absent meaningful and compelling support documents and evidence by the carrier involved, waivers should not be approved in perpetuity without proper monitoring.

That concludes my presentation on federal railroad safety programs. I thank the Subcommittee for giving us this opportunity to present our views.

PREPARED STATEMENT OF ROBERT P. WOJTOWICZ, GENERAL PRESIDENT, BROTHERHOOD RAILWAY CARMEN DIVISION TRANSPORTATION COMMUNICATIONS INTERNATIONAL UNION

INTRODUCTION

My name is Robert P. Wojtowicz. I am General President, Brotherhood Railway Carmen Division, Transportation Communications International Union. I began my railroad career on the Great Northern Railroad on August 10, 1953. I completed my apprenticeship as a carman and entered journeyman seniority October 18, 1958. I worked as a carman and car inspector at Minneapolis, Minnesota in the Union Yard on the Great Northern. I continued working after the merger with Burlington Northern which occurred on March 3, 1970. In 1972 I was elected Local Chairman of Lodge 804. In 1974 I was elected Vice General Chairman of the Burlington Northern Joint Protective Board and served in this position until 1980 when I was elected General Chairman. I was elected General Vice President at the 1983 convention, and on January 1, 1984 I began serving as International General Vice President. I was elected Assistant General President in 1991 and assumed the office of General President on July 2, 1992.

I am personally familiar with the requirements of the laws enacted by Congress and the regulations issued by the Federal Railroad Administration (FRA) governing the inspection and testing of air brakes and components of freight cars that run on the nation's railroads. I am also familiar with the carriers' lack of compliance with these same laws and regulations, especially the regulations requiring air brake inspection and testing of freight cars and their components. Historically, the carriers have always been reluctant to meet requirements imposed upon them for the sake of safety. The Congress must mandate further reforms to assure that the carriers comply with the regulations issued by the FRA. It is up to Congress to resist the carriers' efforts to eliminate or avoid these safety requirements.

HOURS OF SERVICE ACT

In February of 1994 BRC commented on Section 7 of the bill submitted by the Department of Transportation entitled "Federal Railroad Safety Authorization Act of 1994" and in particular suggested revisions to the "Hours of Service Pilot Project", Section 7(a). Although the Department of Transportation did not incorporate these revisions in the bill now before this committee, BRC still regards the changes suggested as necessary to protect the integrity of the Hours of Service Act, remove any possible ambiguity and assure the participation of all employees affected by the Hours of Service Act. These revisions are necessary to allow participation by labor organizations whose members may not be directly covered by the Hours of Service Act but whose work would be affected by any changes in the Hours of Service Act, including pilot projects. The changes this bill would make in the Hours of Service Act will affect different crafts or classifications of employees in numerous ways, for example:

- 1) The assignment of specific tasks to particular crafts,
- 2) The deployment of work forces,
- 3) The utilization of various points and facilities,
- 4) The configuration of work schedules and train schedules, and
- 5) The adoption, interpretation, and enforcement of work rules, including Classification of Work rules, which set forth qualifications for crafts, delineate what employees perform what work, establish the jurisdiction of labor organizations and govern the conduct of employees.

Changes in the Hours of Service Act, even in a pilot program, can affect how other crafts are employed and perform their duties even if the workers are not directly covered by its provisions. Accordingly, BRC proposes the following revisions to Section 7(a) of the proposed amendment of the Hours of Service Act as set forth below with the explanation following the text (*italic* is added words and **bold** is deleted words):

"SEC. 7. HOURS OF SERVICE PILOT PROJECT"

"(a) A railroad or railroads, **and** all labor organizations representing any directly affected covered service employees of the railroad or railroads, and *all labor organizations representing any other employees of the railroad or railroads whose work may be directly or indirectly affected by any change in the requirements of this Act*, may jointly petition the Secretary for approval of one or more pilot projects to demonstrate the possible benefits of implementing alternatives to the requirements of this Act, including, but not limited to, those concerning maximum on-duty and minimum off-duty periods. *All labor organizations representing any directly affected covered service employees of the railroad or railroads and all labor organizations representing any other employees of the railroad or railroads whose work may be directly or indirectly affected by any change in the requirements of this Act must join in such petitions in order for the petitions to be considered.* Based on such a joint petition, the Secretary may, after notice and opportunity for comment, waive in whole or in part, compliance with this Act for a period of no more than two years, if the Secretary determines that such waiver of compliance is in the public interest and is consistent with railroad safety. Any such waiver may, based on a new joint petition, be extended for additional periods, *but the total time of all such additional periods combined shall not exceed of up to* two years, after notice and opportunity for comment. An explanation of any waiver granted under this section shall be published in the Federal Register."

As set forth above in the revisions proposed by BRC, the change on line 1 is for syntax due to the additional language beginning on line 3 and continuing onto line 7. This language added on line 3 and continuing onto line 7 is necessary to allow a voice to labor organizations whose members may not be directly covered by the Hours of Service Act but whose work would be affected by any changes in the Hours of Service Act, including pilot projects.

This additional language is necessary because any changes in the Hours of Service Act can affect workers that are not directly covered by its provisions. This language would require joint petitions to include labor organizations that have a stake in any pilot project, whether the labor organizations represent "directly affected covered service employees" or represent "any other employees who may be directly or indirectly affected by any change in the requirements of this Act". This would assure that all parties affected would be equal participants. Inclusion of all affected parties would prevent such Pilot Projects from leading to the circumvention of railroad work rules, collective bargaining agreements and other obligations.

The additional language beginning on line 11 and continuing through line 18 makes it clear that any joint petitions for pilot programs must include all affected labor organizations to be considered. This is consistent with the additional language beginning on line 3 and continuing onto line 7. This assures that all labor organizations representing affected workers will have the opportunity to fully participate in the process of establishing Pilot Projects. Further, this requirement will prevent FRA from being used by the railroads to circumvent other obligations the railroads have, including collective bargaining agreements. Requiring full participation by all affected parties will allow the parties to resolve any difficulties before any petition would even reach FRA for consideration. This would streamline the regulatory process by eliminating contentious issues before the petition is submitted to FRA for consideration.

On line 24, the addition of "joint" makes it clear that joint petitions are also required when extension for additional periods are sought.

On lines 25 and 26, the additional language eliminates a possible ambiguity and makes it clear that the total time of any and all additional periods combined shall not exceed two years.

BRC urges that these revisions be made part of this bill. These changes will allow participation by labor organizations whose members may not be directly covered by the Hours of Service Act but whose work would be affected by any changes in the Hours of Service Act, including pilot projects. If the Hours of Service Act is to remain true to its original purpose of protecting railroad workers and the general public, then participation by all railroad crafts affected is necessary.

SHIPMENT OF RADIOACTIVE MATERIALS BY RAIL

There is one issue which should be of immediate concern and that is the ever-increasing shipment of radioactive materials by rail throughout the United States. Beginning in July of 1986 shipments of radioactive waste from the Three Mile Island nuclear plant in Pennsylvania made their way across ten states from Middletown, Pennsylvania to Idaho Falls, Idaho. These initial shipments of radioactive materials in specifically designed casks now appears trifling in comparison to the unprecedented shipment of radioactive materials which is now anticipated and which will increase significantly over the next twenty years. This great increase in the movement of nuclear materials is due to changes in nuclear weapons deployment and policies and the continued storage and disposition of spent nuclear fuel. As nuclear weapons are dismantled and spent fuel is moved to off-site storage and disposal, rail transportation of these materials will increase dramatically. Along with the increase in shipments of nuclear materials there must also be a corresponding concern with the safety of railroad workers and the general public. Appropriate legislation must recognize and address the areas of concern in order to assure safe shipment and handling of radioactive materials by rail.

This phenomenal increase in the shipment of nuclear materials is due to factors related to the end of the Cold War and the end of on-site storage capacity for domestic nuclear reactors. This remarkable increase in the shipment of radioactive materials is attributable to the following factors:

1. Dismantlement and disposition of U.S. nuclear weapons warheads as a result of START II treaty and the diminished need for nuclear weapons and the increased cost for stock piling nuclear weapons.
2. Importation of weapons grade, highly enriched uranium (HEU) as a result of the recent U.S., Russian and Ukrainian foreign weapons dismantlement program this radioactive material may be imported in several forms: native metal form, in spent fuel assemblies, or encapsulated form.
3. Plutonium disposition from both U.S. and possibly foreign sources.
4. Spent fuel movements arising from the need for interim storage and disposal for Department of Energy research reactors and weapons complex reactors.
5. Spent fuel movements arising from the need for interim storage and disposal for U.S. Navy reactors, such as submarines and other nuclear powered vessels.
6. Commercial civilian utility reactor spent fuel movements for storage and disposal purposes today. Spent fuel generated as part of civilian power production is in storage at 77 different storage sites in 35 states. Currently there are approximately 93,000 spent fuel assemblies in storage. It is anticipated that approximately 200,000+ assemblies will be generated in total for the life of the 114 civilian nuclear plants. All these assemblies must be moved eventually to a disposal site.
7. Importation of spent fuel from foreign nuclear reactors for storage and disposal in the U.S.
8. Miscellaneous movements of radioactive waste and materials from clean up and decontamination of various nuclear sites.

The advantage of rail transportation of nuclear materials is obvious—greater weights and quantities can be shipped by rail rather than by truck transportation. Rail transportation will prove to be the most economic transportation alternative as evidenced by recent Department of Energy (DOE) press releases stating that rail has been chosen as the preferred mode of transportation of nuclear materials. Railway labor welcomes the opportunity to participate in the safe transportation of radioactive materials by rail. However, safe transportation by rail means that there are several measures that must be undertaken immediately. Due to foreign policy objectives and domestic goals nuclear materials must be transported immediately. Shipment of nuclear materials is necessary to keep electricity running for the public.

Railway labor agrees with the policy of shipping nuclear materials by rail. Such shipments must be done safely. To the extent that there is statutory authority now for the regulation of nuclear materials the regulations are inadequate. There have been dramatic changes in the last twenty five years which were not anticipated when these laws and regulations took effect. As a result of the great increase in the shipment of nuclear materials the current laws and regulations are inadequate. The laws and regulations must be updated to deal with the current and anticipated volume of the shipment of nuclear materials.

For instance, nuclear materials must be shipped in approved and tested containers which will not only contain the radioactive waste but will prevent the exposure of rail workers and the general public to harmful levels of radioactivity. A train with radioactive materials passing through a community does not stay in place and increase radiation levels to those surrounding it as long as the train is moving. How-

ever, railroad employees and communities surrounding trainyards and other facilities will face an increased risk of harmful radiation if inadequate containers are shipped on trains which remain in the yards or other facilities for any period of time.

Train crew members, yard personnel and carmen face the threat of increased radiation when the radioactive containers remain in one location for extended periods of time. Carmen are especially vulnerable to this risk in that they must work on or next to trains containing radioactive materials. In addition to performing the necessary air brake tests and inspections and mechanical inspections on the trains containing the nuclear waste, the carmen will also be performing this same work on trains on adjacent tracks or in the same facility. For this reason there must be restrictions on employee exposure to radiation as well as restrictions on the amount of radiation emitted from such shipments. Additional shielding must be provided that anticipates that rail workers could be exposed for hours to harmful radiation when they are required to perform inspection and repairs the freight cars carrying nuclear materials.

While initial terminal air brake tests and inspections and the other tests and inspections required by federal law and regulations must be enforced on any train carrying nuclear materials, such trains should be subjected to additional stringent inspection requirements. Any trains carrying radioactive materials must be dedicated to such service only and be subject to all of the usual safety regulations as well as those adopted for the shipment of nuclear materials. Such inspections should, at a minimum, include monitoring radioactivity, inspection of the containers or casks containing the nuclear material to assure that they are intact and secure at regular intervals during shipment, inspection of all components of the train and car air brake systems and a complete mechanical inspection, under 49 CFR §215.13, Appendix B by a qualified designated inspection under 49 CFR §215.11. Additionally, there should be written notification and certification of all inspections and tests on the trains and freight cars carrying nuclear materials.

The increased shipment of radioactive materials by rail will present unique hazards to railroad personnel. All railroad personnel involved in the operation, inspection, testing, maintenance, repair and servicing of freight cars, locomotives and other equipment used to ship nuclear materials should be trained in the handling of hazardous materials and in appropriate emergency responses. A training program should be established for all such personnel. Each carrier should be required to study and adopt emergency response contingencies in the event of derailments, collisions, and other circumstances that could lead to the release of radioactive materials. Additionally, increased security on the trains is necessary to prevent acts of vandalism, sabotage and terrorism which could lead to the release and diversion of radioactive materials. Given the hazardous potential of the release of nuclear materials, it is necessary that all freight cars and rolling stock involved in the shipment of nuclear materials be in top operating condition. For this reason, we would recommend that a worker trained and qualified in freight car inspection and repair be assigned to ride with each train to perform all necessary inspections and to make repairs as needed while the train is in transit. The National Mediation Board (NMB) classifies railroad employees by the type of work they perform. Carmen are the only ones truly trained and qualified in the construction, repair, maintenance, servicing, inspection and testing of freight cars. This is evidenced by the complete and thorough mechanical inspection that carmen are required to perform under 49 CFR §215.13, Appendix B. An experienced carman can prevent and remedy problems en route before the problems develop into disasters.

Because of the unique nature of radioactive materials and the issues surrounding their safe shipment by rail, BRC recommends that there be additional rulemaking by the FRA concerning the movement of nuclear material by rail. This would include freight car building specifications, train composition, train capacity and speed, placarding, security, and other issues of concern. FRA should also act to prevent the exposure of railroad workers and the general public to harmful levels of radiation emitted from the shipment of radioactive materials by rail. These additional regulations should be in addition to the current laws and regulations governing rail transportation. Moreover, a review of the regulations concerning exposure levels should be revised to reflect current anticipated shipments of nuclear materials. FRA should also state as its policy the stringent enforcement of all applicable laws and regulations concerning railroad transportation and the shipment of radioactive materials.

The shipment of radioactive materials by rail will provide the carriers with billions of dollars and profits as shipments increase. Several railroads are the only rail providers to many of the nuclear plants that service the nation. The weight and volume of the nuclear materials will make rail transportation the only economically feasible alternative in many instances. Further, rail transportation can offer move-

ment of the radioactive materials through less densely populated areas, an advantage over shipment by truck. Further, greater loads can be carried by trains over greater distances thereby reducing the total number of shipments necessary.

There should also be greater scrutiny of the Interstate Commerce Commission (ICC) approval of transfer of track as well as abandonment of rail to short lines and non-rail entities. The effect of recent sales could result in a tremendous increase in the cost of the movement of nuclear materials over newly formed entities as well as the need to move nuclear material through more densely populated areas as a result of the abandonment of lines and track. This could cost the government millions of dollars more for the movement of nuclear materials as numerous smaller entities charge handling fees and mileage fees that a single larger entity would not be allowed to charge. Larger carriers appear to be positioning themselves for just such arrangements which would increase the cost of nuclear shipments tremendously.

It is absolutely essential that Congress address the issues associated with the tremendous increase in the shipment of radioactive materials by rail. This demands immediate attention. Shipment of hazardous materials by rail will affect railroad workers in particular. However, the effect on the cities, towns, farms, national parks and forests and other environmentally sensitive areas cannot be ignored. In addition to training of railroad workers in the hazards and dangers of handling radioactive materials, there must also be a corresponding concentration of training and resources in the communities through which these trains will pass. Public safety demands that police departments and fire departments across the nation be trained in the proper response to emergencies which involve radioactive materials. Proper equipment such as radiation suits, decontamination materials, radiation monitors, and training manuals will also be required. If the United States is to undertake this commitment to assure the safe disposition and storage of radioactive materials, it must also be committed to the safe transportation of these materials by rail. Too much depends upon the proper handling of nuclear materials to give it anything less than top priority.

ONLY CARMEN ARE QUALIFIED TO PERFORM AIR BRAKE INSPECTION AND TESTING AND MECHANICAL INSPECTION

It is my experience in the railroad industry that compels me to testify that the air brake inspections and tests required by the FRA are absolutely essential to safe operation of trains on this nation's railroads. These air brake inspections and tests are essential to the regulations governing air brakes and mechanical components of all freight cars in all trains and are designed to assure that freight cars will operate safely when they are put into trains.

Further, it is essential that these air brake inspections and tests be performed by qualified carmen car inspectors. Legislation is necessary to require that Carmen shall be designated as the only craft qualified to perform all power brake and mechanical tests and inspections on railroad rolling stock. Carmen are the only craft trained to service, maintain, repair, inspect and test the air brake systems and mechanical components in freight cars. The carmen are the only class and craft so designated by the NMB which clearly establishes that each craft is uniquely trained in the specific area of expertise. Carmen are the craftsmen that have the necessary experience and training to properly perform the inspections and tests required by the FRA. Carmen have served apprenticeships and have developed their skills with years of experience on the job. Carmen have the necessary knowledge, experience and understanding of air brake systems and mechanical components to assure that cars do not travel in trains with defects that can lead to derailments and other disasters. Carmen are the first line of enforcement of FRA regulations and AAR requirements. Anything less than having carmen perform these inspections and tests means that these inspections and tests are not being performed properly, if at all.

POWER OR TRAIN BRAKES SAFETY APPLIANCE ACT OF 1958

The legislative history indicates that Carmen were part of the legislative plan of air brake inspection and testing. Prior to enactment of the Power or Train Brakes Safety Appliance Act of 1958 (hereinafter also called "the Act"), there were no federal laws or regulations prescribing the manner or circumstances under which air brakes on the trains of our nation's railroads were to be inspected and tested. The need for regulations governing the manner and circumstances under which air brake inspections and tests were to be performed, however, had been recognized for decades.

Indeed, the Association of American Railroads (AAR) had attempted, since 1925, to regulate this aspect of railroad safety. The AAR adopted minimum standards and

guidelines in a code of rules for inspection and testing of air brakes. However, not all railroads adopted the AAR code of rules. In addition, even among the carriers adopting this code of rules, compliance therewith was poor. The AAR code of rules was advisory only, and where a carrier for any reason deemed it to be in its own self-interest to refuse or fail to comply with this code, the carrier could do so with impunity. Indeed, non-compliance with AAR code of rules pertaining to air brake inspection and tests was the rule rather than the exception. The failure of the railroads to perform sufficient and adequate air brake inspections and tests on their own was the primary impetus for enactment of the Power or Train Brakes Safety Appliance Act of 1958.

A review of the legislative history of the Power or Train Brakes Safety Appliance Act of 1958 clearly reveals the problems which precipitated the amendments of the Federal Safety Appliance Acts by the enactment of the Power or Train Brakes Safety Appliance Act of 1958. The detailed air brake tests and inspections required by the Act initially were based upon tests and inspections previously developed and adopted by the AAR.

The Interstate Commerce Commission, in its annual report dated November 1, 1956, to Congress, explicitly and expressly recognized that sufficient and adequate air brake inspection and testing procedures were of fundamental importance to efficient and safe operations of our nation's railroads. The ICC report also recognized that the railroads, under self-regulation had a record of very poor compliance with the AAR code of rules for air brake inspection and testing. The ICC specifically noted that the most important safety procedure to be performed was a visual inspection of each brake after freight cars had been assembled in a train and prior to the trains departure from a terminal. Furthermore, it was deemed absolutely essential that rigid maintenance standards for such air brakes be enforced. In response to the recommendation of the Interstate Commerce Commission, bills were proposed in the United States Senate and the House of Representatives. Hearings on those bills were conducted by Subcommittees of the Senate and House. The nation's railroads and labor organizations appeared and presented statements and supporting data.

The railroad industry vehemently opposed the proposed legislation and denied the charges of the Interstate Commerce Commission. They pointed to an alleged overall improved safety record and contended that adequate testing, maintenance and repair of air brakes were matters more properly left to managerial discretion. In spite of the railroads' bitter opposition to the Act, Congress, in its wisdom, was persuaded the Act was essential to the safe operation of our nation's railroads and standards for the air brake inspection and testing were not matters to be left to the whim of railroad management. Some of the evidence persuading Congress came from ICC Chairman, Owen Clarke, who testified (H. R. Hearings, p. 55):

"The Safety Appliance Acts were enacted to promote the safety of employees and the traveling public. However, there is a growing trend toward balancing costs of material and labor against the costs of penalties for violations. At some locations, it is considered more economical to run the rise of being penalized than to comply with statutory requirements. This is an alarming condition that is far from conducive to safe railroad operation."

*Although our inspection procedures and attitudes have not changed in any substantial respect, our records show a continuing deterioration in safety appliance maintenance. * * ** (Emphasis added.)

He continued (p. 59):

"Modern railroading with its greatly increased traffic, heavier trains and higher speeds has imposed a burden on the power or train braces which was scarcely envisioned a few years ago. The distance within which a moving train can be stopped is affected by many conditions and factors, such as whether it is a passenger or freight train; length of the train, its weight; condition of the cars, whether empty or loaded; percentage of braking power; adjustment of piston travel; type of brake equipment; pressure carried; condition of wheels and rails; grade and alignment of tracks; and whether a service or emergency stop is desired. Numerous railroads now have speed limits up to 60 m.p.h. for freight trains, and trains of 150 cars or more are common place. These great masses which move over the rails may weigh as much as 10,000 to 15,000 tons or more. Thus, it is readily apparent that in order to assure maximum safety, the brakes of such trains should be operating at maximum efficiency at all times." (Emphasis added.)

And concluded (p. 60):

"A few of our air brake inspection reports, selected at random, show that inspection, maintenance, and repair procedures presently employed are not only ineffective, but seriously threaten the safety of railroad employees and the traveling public." (Emphasis added.)

Even in 1958 it was clear that the very advances in technology that allowed for greater speeds, heavier freight and increased traffic also required greater compliance with the regulations governing safe operation of air brake systems and other mechanical components. Then as now, technology must work to operate safely. The safe operation of trains on the nation's railroads requires that inspections be done to find any defective equipment and repairs made before the equipment is allowed to run in trains. Back in 1958 and now in 1994, the railroads have argued that improvements in technology have eliminated the need for certain inspections and that the railroads be left to decide whether or not to do any inspections. The carriers have sought the piecemeal elimination of the regulations that require air brake and mechanical inspections and tests under the Federal Safety Appliance Acts and the Power or Train Brakes Safety Appliance Act of 1958. The inspections and tests required by federal law are part of a comprehensive plan to insure the safe operation of trains on the nation's railroads. Full compliance is necessary.

In 1958 there was no question that carmen were the craft that performed the work of air brake inspection and testing. It was anticipated that the carmen would continue this work. Despite the railroad's vehement opposition to the Power or Train Brakes Safety Appliance Act of 1958 and its requirements, there was no opposition or issue raised as to what craft was to perform the work of air brake inspection and testing once the Act was passed. At the congressional hearings, representatives of the Interstate Commerce Commission, the nation's railroads and labor all agreed that the work of inspecting, testing, installing, maintaining and repairing power or train brakes had been and under the Act would be the work of the carmen-car inspectors. Of course, historically, that work had always been performed by carmen-car inspectors.

In questioning the Assistant Director of the Bureau of Safety and Service, Interstate Commerce Commission, on the subject of which employees perform those tests and inspections, the following occurred (Senate Hearings, p. 13):

"Senator PURTELL. *Does that refer to what we commonly call a car knocker job, when they stop.* Is that his job normally to inspect those brakes or whose job normally is it? Is that a specialized job for somebody or is it part of a car knocker's job?

"Mr. LONGHURST. *In practically all cases it is the car knocker's or car inspector's job.*" (Emphasis added.)

The following occurred during the appearance of the Vice President, Operation and Maintenance Department, Association of American Railroads (Senate Hearings, p. 277):

"Mr. MAY. Mr. Chairman, this isn't a question of annual or semiannual inspection. This is a question of—let's take the ordinary run of a freight car where it is pulled off from an industrial siding and moved over into a terminal where it is made up into a train, at what we might call the *initial terminal*.

"The train, then, is inspected through the procedures that are outlined of making your brake application and inspectors walking over the train to see that the brakes have applied.

"Senator SMATHERS. *These are inspectors of the railroad?*

"Mr. MAY. *These are inspectors of the railroad.*

"Then the signal is given for release of the brakes and they walk over the train to see that the brakes are released. If all of the brakes are released and no defective equipment found, that train goes on its way.

Now, it might go a hundred miles and have this inspection all over again, this same type of inspection." (Emphasis added.)

During the appearance of the General Attorney of the Association of American Railroads before the House Subcommittee the following occurred (House Hearings, p. 174):

"Mr. HOWARD. The question related to power brakes, yes, sir. The question I asked by the Senate committee related to that. *However, I believe and I am subject to correction, those inspectors would also cover other safety appliances. Yes, sir, I am told that this is correct.*

"The CHAIRMAN. *In other words, the inspectors on brake defects and so forth have the same responsibility on all other defects of the rolling stock?*

"Mr. HOWARD. *Yes sir.*

"The CHAIRMAN. And you say you do not have the information as to whether or not the inspection force has been increased or remained static or decreased?

"Mr. HOWARD. We do not have it at this time, no, sir. The figures are to be collected from some representative roads, and should be ready, I would think this week. We can furnish that for the record.

* * * * *

"The CHAIRMAN. Then, you are not in a position to state whether there has been an inspection force maintained over the last several years or whether it has been increased or whether it has been decreased.

"Mr. HOWARD. I cannot give you the details of that, no, sir. We certainly do have an inspection force. I can say that. But how it has fluctuated in recent years, I do not know." (Emphasis added.)

Data concerning the number of freight car inspectors employed on the Chesapeake & Ohio Railroad and the Atchison, Topeka & Santa Fe Railroad during 1954, 1955 and 1956 was provided to the Senate and House Subcommittees in the form of an exhibit. Suffice it to say that all data regarding this work submitted to the Senate and House Subcommittees by the railroads concerned only the carmen craft.

The labor representatives, representing the railway labor organizations, appearing before the Senate Subcommittee stated the following (Senate Hearings, p. 196):

"Senator PURTELL. Have you any information which would indicate whether or not the crews that are available for such inspection, whether it would be physically possible for the number allocated to that inspection to do the necessary inspection on the trains operated? That is a long question, maybe I had better rephrase it.

"Mr. HEISS. I am glad that you asked the question, sir. I think I have the answer to it.

"Senator PURTELL. All right.

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"Mr. HEISS. *If the inspection crews were maintained at an adequate level, the company inspectors—and the men are available—these inspections could be made, they could be made readily without delaying the trains and with increased efficiency. The trouble is that in recent years the railroads have pared all of their forces, and particularly their shop forces and their maintenance and their inspector forces so that the number of employees available to carry out these functions is now below standard.*

"Let me give you just these figures along the way, if you will.

"Senator PURTELL. Very well.

"Mr. HEISS. * * *

"* * * *The company inspectors come from the craft of carmen.* In December 1950 there were 22,303 passenger carmen. In December 1956 that force was reduced to 17,075. (Emphasis added.)

* * * * *

"There are freight-carmen in December 1950 in the total number of 66,212.

"Senator PURTELL. These are inspectors.

"Mr. HEISS. No, *these are carmen. The inspectors come from that craft.* In December 1956 there were 57,985 carmen, a very substantial proportion loss of force.

"*Now what has happened is that they have taken off the inspectors. They don't have an adequate number available to do the job where the inspectors are assigned and at intermediate terminals where they formerly had inspectors they have taken them off entirely.* (Emphasis added.)

* * * * *

"Senator PURTELL. Let me ask one question. You speak about these 57,985. These are not all car inspectors?

"Mr. HEISS. No.

"Senator PURTELL. Then can you give us a figure on the car inspectors, because those are the people that inspect these brakes; are they not?

"Mr. HEISS. We don't have the figures and I don't think they are broken down in the Commission records.

"Senator SMATHERS. There is not a separate craft of just car inspectors; is that right?

"Mr. HEISS. There is not.

"Senator SMATHERS. *In other words, the fellows who do inspect the brakes on the car also do some other job?*

"Mr. HEISS. That is right.

"Senator PURTELL. *Isn't it true, these fellows whom I think are commonly called car knockers, are fellows that inspect at various stops or at the terminals and they check not only the brakes, but other parts of the equipment for which there would be a need for inspection at that point, such as, hot boxes?*

"Mr. HEISS. Yes; *they look for everything that can be observed.*

"Senator PURTELL. I am trying to find out, can we get any relationship between the number employed at some time in a prior year and the number now,

to find out whether they are physically able to make these inspections with the number of cars in operation?

"Mr. HEISS. I don't have the figures; I don't know. *I can tell you what reports from our people are and that is that the number of car inspectors has been greatly diminished below the standard at which it ought to be maintained and that our people tell us that at places where car inspectors were formerly assigned they had been taken off.* (Emphasis added.)

"Senator PURTELL. It is your contention that even if they wished to do the necessary inspection that the forces available by the railroad are inadequate to do it?

"Mr. HEISS. Yes, sir.

"Senator PURTELL. That is what I want to find out.

"Mr. HEISS. That is exactly our contention."

Several specific facts are demonstrated with complete clarity when the foregoing discussion is considered. When the Act was enacted, Congress, the railroads and the railroad labor organizations expressly recognized that air brake inspection and testing was the work of the carmen-car inspectors. Mr. Longhurst, an ICC Assistant Director could hardly have been any more unequivocal when he testified that, in 1957, "[i]n practically all cases it is the car knocker's or car inspector's job" to inspect the brakes. Further, Congress, the railroad and labor organizations expressly contemplated and intended that carmen-car inspectors would perform the work of air brake inspection and testing required by the Act and the regulations adopted pursuant thereto. No other craft was even mentioned as intended or even capable of performing air brake inspection and testing. Indeed, any fair reading of legislative history of the Power or Train Brakes Safety Appliance Act of 1958 demonstrates careful inspection by trained and qualified carmen-car inspectors was considered to be the crucial linchpin to effective enforcement of the Act.

As will be discussed below, performance of proper air brake inspections and tests still depends upon carmen-car inspectors whose extensive training and experience give them a superior working knowledge of all aspects of freight cars. Furthermore, the carmen-car inspectors are the necessary cog around which the machinery of federal legislation and regulations governing air brake inspection and testing have been built.

AIR BRAKE TESTS AND INSPECTIONS REQUIRED BY FEDERAL LAW

Power brake systems are complex and consist of numerous working parts which must work uniformly to insure adequate braking force to stop the train both in its normal operations and in the event of an emergency application of the air brakes. Allowing cars with less than full braking power to be put into trains is a dangerous and unthinkable practice which exposes railroad workers and the general public to serious dangers and the risk of further catastrophes. The carriers would rather move their freight with only minimal inspection, or no inspection at all. Trains are rushed through inspection points with hurried, improper inspections or run around inspection points, bypassing them all together, in violation of federal law. As this illegal, dangerous and abusive practice continues to grow, so does the risk to railroad workers and the general public.

The Power or Train Brakes Safety Appliance Act of 1958 was enacted by Congress in response to the widespread refusal of carriers to comply with the AAR's minimum requirements for inspecting, testing, maintenance and repair of air brakes. Regulations adopted pursuant to the Power or Train Brakes Safety Appliance Act of 1958 set forth with great specificity the performance standards for freight car brakes. These same regulations set forth the specific inspections and tests required to insure these performance standards were met. Since at least 1925, similar inspections required by the AAR Code of Rules were being performed to some extent by the various carriers. When federal regulations made these inspections and tests mandatory and enforceable by fines, the car inspectors were charged with the responsibility of determining that all cars complied with the new regulations and could be operated safely.

These regulations recognize the historical fact that inspectors have traditionally been drawn from the carmen's craft and depend upon the carmen's superior knowledge, training and expertise in all aspects of freight car construction, maintenance, repair, rebuilding, inspection and testing. In fact, the first regulations adopted were the AAR rules under which carmen-car inspectors had been performing tests and inspections of air brake systems and appurtenances for decades prior to the enactment of the Power or Train Brakes Safety Appliance Act of 1958. The legislation and regulations clearly contemplated that carmen would be the ones to perform the required tests and inspections. Carmen have always received extensive training and

instruction in the proper operation, repair, maintenance, inspection, testing of air brake systems.

The FRA regulations provide specifications and requirements for the operation and performance of air brake systems and their component parts at 49 CFR Part 232, Appendix B (1992). These specifications and requirements provide exact figures for the air pressure needed to cause an emergency application of the air brakes, the amount of time needed for brakes to move to release position after application, the recharge of reservoirs, the operation of the brake valve, and numerous other details which dictate the design, construction, function, and maintenance of air brake systems. These specifications and requirements cover all aspects of operation of air brake systems and their components and have been adopted and prescribed as federal regulations. See, 49 CFR §232.3. Only carmen have been trained to construct, maintain, repair, rebuild, inspect and test air brake systems and their components to meet these requirements. It is essential that carmen inspectors, the only personnel thoroughly trained in all of the requirements and specifications of air brake systems, be allowed to inspect and test the air brakes and appurtenances as required by federal law.

There are numerous requirements for inspections and testing under 49 CFR §232.12. Air hose couplings must be inspected for damage. Once coupled, the couplings must seal properly. The air hoses must be in proper condition and in the proper position. If the air hoses are too taut or too slack, they may leak or become uncoupled. If the air hoses are so slack that they hang down too far, they may hit the track bed as the train moved along the rails. This may cause a leak or cause them to become disconnected, throwing the entire train into an emergency application of the brakes. In fact, federal regulations, 49 CFR §215.121, require that no part of a freight car, except the wheels, may have less than 2½ inch clearance from the top of the rail. Any cars that do not comply with this section must not be placed or continued in service. All of the cut-out cocks must be in proper position to allow the flow of air to charge the car's air brake systems. It is a violation of the Power or Train Brakes Safety Appliance Act of 1958 to run even a single car with the air cut out and the car's air brake system inoperative. Retaining valves and retaining valve pipes must also be inspected to assure proper setting and operation. A clogged retaining valve can prevent brakes from releasing. The entire brake system must be inspected for leaks and repairs must be made to avoid leakage. The brake system on each car must be able to maintain air pressure throughout the train's entire trip. Defective air brake components such as brake pipes, control valves, air hose couplers, gaskets, seals, or air hoses, can cause a sudden loss of air pressure and put the air brakes of the entire train into emergency application. Emergency application of the air brakes causes considerable stress on all car components, especially if any car components are defective and in need of repair.

Although air brake systems are complex and involve numerous operating parts, competent and qualified carmen-car inspectors can readily detect any defective conditions in a proper and thorough air brake inspection and test. Only carmen-car inspectors have the training and experience to fully understand the intricate workings of air brake systems. The carmen craft is the only craft thoroughly trained and educated in the detection and repair of defective air brake systems, safety appliances and other equipment essential to the safe operation of freight cars themselves and the train as a whole. Only carmen inspectors are fully capable of both the inspection and the repair of the air brake systems and the other mechanical equipment.

The intent of the regulations in requiring carmen to perform the air brake inspections and tests is clear. In addition to requiring proper air brake tests, the regulations require that these tests be performed by a qualified person. Section 232.12 further defines who is considered a qualified person, stating:

"Where a carman is to perform the inspection and test under existing or future Collective Bargaining Agreement, in those circumstances a carman alone will be considered a qualified person." (Emphasis Supplied) 49 CFR §232.12.

At points where there are carmen to perform the air brake inspection and tests it is a violation of federal regulations, to allow anyone other than a carman-car inspector to perform the required air brake tests and inspections. This also applied to those points where carmen-car inspectors have been removed as inspectors in violation of the Agreements. The Federal Regulations clearly recognize the unique qualifications of carmen inspectors. The three year apprenticeship program and the work that carmen-car inspectors perform in the railroad industry in constructing, repairing and maintaining railroad freight cars of all types has made them the most qualified in both training and experience to perform the tests and inspections required under the Power or Train Brake Safety Appliance Act of 1958. Agreements have always been intended to preserve for carmen-car inspectors the work of inspection which, historically and traditionally, has always been done by qualified carmen

inspectors. The federal regulations reflect this reality by defining carmen as the qualified persons to perform air brake inspections and tests.

For air brakes to work properly they must be inspected, maintained and serviced to prevent any defective conditions. Any defective conditions that are detected during a thorough and proper inspection must be promptly repaired before the freight car is allowed to continue in service in any train. The car inspector must look for and detect unsafe and defective conditions which relate to defects in the mechanical parts of the freight cars.

The car inspector must inspect to find defects in any and all of the mechanical parts of the freight car. Defects of various types in the above mechanical parts of a freight car can and do arise during the switching operations necessary to make up the outbound train and during the operation of a train en route to its destination. Mechanical defects which can be repaired or otherwise remedied while the freight car is in the train will be made by the carman-car inspector. The car inspector must inspect all mechanical parts. Inspection, of course, requires observation and judgment. The car inspector must exercise judgment based upon what he observes. The car inspector's judgment as to whether a mechanical part on a freight car is defective or not is based upon education and training he has received during his apprenticeship program and his wealth of experience inspecting and repairing the same mechanical equipment.

The car inspector will repair all mechanical defects he finds or if necessary bad order a car and remove the car from the train for subsequent repairs by carmen at the repair track or other such facility. Both sides of the train must be inspected to determine that all mechanical parts are operational. Not all mechanical parts, nor air brake components can be inspected from just one side of the train. Moreover, the car inspector is inspecting the air brakes on these cars for leaks by both looking and listening for leaks. Consequently, it is the car inspector's responsibility to determine that each car is mechanically sound and also that there are no leaks in the air lines or braking systems of the freight cars. The carman must also inspect each car to determine that the brakes have released. Again, adjustments or repairs are made on the spot where necessary. He has now thoroughly inspected the braking systems to confirm that the air brake system on each and every freight car does not leak and sets and releases.

ELIMINATION OF OTHER INSPECTIONS AND INCREASED DEPENDENCE ON INITIAL TERMINAL, INSPECTIONS

Over the past ten years or so, the number and type of inspections on the nation's railroads have been decreased and some inspections have been eliminated entirely. Changes in the regulations requiring inspections and testing of railroad equipment have been made on the promise of greater compliance with and enforcement of the initial terminal air brake test and inspection and those inspections that remain in force. The reduction and elimination of the other types of inspections have made the role of carmen car inspectors even more important. As the carmen are precluded from performing these other inspections, the opportunity to detect and repair defective railroad equipment has been significantly reduced. When carmen are prevented from performing initial terminal air brake inspection and testing, there is no opportunity to remove dangerously defective freight and passenger cars from service.

One example of reduced inspection opportunities is the reduction of the intermediate test requirements. Federal law requires that air brake inspection and testing be performed if a train has traveled 1,000 miles as set forth in 49 C.F.R. § 232.12(b). The mileage for this inspection was increased from 500 to 1,000 effective October 1, 1982. This eliminated the intermediate inspection for trains that travel over 500 miles but less than 1,000 miles. For trains that travel 1,000 miles or more the inspections are now done half as often as they once were. Consequently, there is greater reliance today on a thorough 1,000 mile inspection. Although the 1,000 mile inspection procedure is shorter and does not require the full inspection required at the initial terminal, it is the only inspection that many trains receive after they depart the initial terminal as mergers have increased the mileage a train may travel without receiving or delivering any cars in interchange. The 1,000 mile inspection is designed to find any defects that may have developed en route and threaten the continued safe operation of the train.

The public's interest in safe operation of this nation's railroads is significant and has been recognized by our Congress, specifically by its enactment of the Power or Train Brakes Safety Appliance Act of 1958. Moreover, adequate, proper and vigorous inspections and tests by trained and qualified carmen are now even more crucial to railroad safety because the frequency, intensity and scope of the inspections and tests required of carriers have been reduced, as further set forth below. Inspection

and testing have been eliminated on the premise that the remaining inspection and testing requirements would be vigorously enforced by the car inspectors.

Along with the change in the mileage requirements from 500 to 1,000 miles in 1982, there were other changes in the tests and inspections required by the regulations enacted under the Power or Train Brakes Safety Appliance Act of 1958. These additional changes included modification of the interchange inspection, extension of the maximum permissible piston travel limit from 10 inches to 10½ inches, elimination of the requirement for a single car test of brake equipment on a date of last test basis (commonly known as "in date testing" or "IDT"), and revision of the initial terminal test requirements regarding notice of the test having been satisfactorily performed. These changes in the regulations eliminated testing of air brakes entirely in certain situations and in effect placed a greater dependence on thorough and proper initial terminal air brake tests required under 49 CFR § 232.12. Indeed, this increased reliance on proper initial terminal air brake tests was the express reason behind the increase from a 500 to a 1,000 mile intermediate inspection and most of the other changes listed above. The regulatory history of these changes demonstrates that the FRA amended its regulations based upon representation of the carriers that they would comply fully with the initial terminal tests. 47 CFR 36794 (8-23-84)

Another of the changes was the elimination of the requirement for a single car test of air brake equipment on freight cars on a date of last test basis which had been required in 49 CFR § 232.17(a). This testing was more commonly referred to as "in date testing" or "IDT". IDT involved testing of the air brake system, lubrication, inspection and oiling of the retainer valve and hand brakes, and adjustment of piston travel. The date of the IDT was then stenciled on the car which would indicate when the car was next due for an in date air brake test and inspection. Previously, old air dates required that the brake valves, or control valves, were to be removed and reconditioned or replaced with reconditioned valves.

A requirement that remained in § 232.17 was the regulation tied in with the requirements of the current AAR rules. These requirements have changed and lengthened the amount of time between periodic cleaning, oiling, testing and stenciling (COT&S) of air brake valves. Interchange Rule 2 had previously required COT&S on cars with AB type brakes before the expiration of 96 months (8 years). Numerous cars were due for COT&S in 1984 as per interchange Rule 2 as it then existed. Just as more cars became due Interchange Rule 2 was changed again and did not require COT&S until 120 months (10 years). Many of these same cars were not due for COT&S until 1986 when the AAR again increased the period to 16 years based on additional studies by the AAR that gave the valves a life of 16 years. It should have come as no surprise that the AAR eliminated the COT&S entirely and replaced it with a repair track test in 1992 just as the cars with repeatedly extended COT&S dates were coming due.

The air brake tests on run-through and unit run-through trains were also eliminated when § 232.19 was removed from the regulations by the rule change that accompanied the 1,000 mile inspection in 1982. See, 47 CFR 36792 (8/23/82). The only reason given in the Section-by-Section Discussion was that: "The run-through train provision is no longer necessary in light of the revised interchange inspection requirements." Again, the removal of this section eliminated the air brake tests for run-through and unit run-through trains and placed greater importance on the initial terminal air brake test, because several tests and inspections on the run-through trains are not done under the interchange rules. Additionally, there are no record keeping requirements for air brake tests and inspections under the interchange test and written notification of the tests having been satisfactorily performed under the initial terminal test is required only in limited circumstances.

One important difference in the run-through tests and the interchange rules is that the run-through rules required inspection and adjustment of piston travel for intermediate inspections per § 232.19(f). Under § 232.19(c) run-through trains were to receive the initial terminal air brake test as set forth on § 232.12(c)-(j). The air brake tests on run-through trains called for the same inspections and tests required for the initial terminal air brake tests set forth in § 232.12(c)-(j) to be performed under certain circumstances with the added requirement that under the run-through test, the inspections and tests be performed where adequate repair facilities were available per § 232.19(g), which had provided:

"(g) The inspections and tests made under § 232.12(c)-(j) as required by this section shall be performed by qualified carrier personnel at locations where adequate repair facilities are available to maintain power brake systems in effective operating condition in conformity with this part. Defective cars shall be repaired or removed from service at the point of inspection and testing."

See, 49 CFR § 232.19(g) (1981).

This requirement was eliminated when §232.19 was removed in its entirety. This language in §232.19 had assured that the carriers would be obligated by law to continue their past practice of having cars inspected at facilities where qualified carmen-car inspectors were present along with repair facilities where carmen were also employed. This had prevented the carriers from running unit trains without inspections and repairs by utilizing points where no qualified carmen-car inspectors and mechanics were employed. Carriers have now changed their operations in a bad-faith departure from this past practice and are avoiding proper inspections by carmen-car inspectors and repair facilities. Trains are not inspected properly, if at all, and are being run with defects. Trains are supposedly inspected at sidings or in parts of the yard where there are no carmen. Even initial terminal tests are being attempted at yards and on sidings where there are no carmen or where carmen have been eliminated by these manipulations of the carriers.

What happens to the cars that are defective and need repair? How can these cars be repaired when there is no place to set them out and no carmen to repair them? What do trainmen do if they find defects on the road or at points without carmen? What choices do they have? They can remain within the law and set the car out of the train for repairs or they can violate the law and risk running the unsafe and defective cars in the train, often by cutting the air out of the car. Running the defective car in violation of federal law is the more attractive alternative to the train and switch crews because it does not cut into their time and keeps the train running dangerously on time. The carriers expect and encourage this practice. Train and switch crews have neither the extensive training nor the special tools to repair freight cars. Dangerously defective cars are being run until the defects worsen and accumulate preventing the cars from rolling anymore at all. This dangerous practice continues to grow.

The elimination of all of these inspections and tests by qualified carmen inspectors has done one thing. It has placed primary reliance on the initial terminal air brake test as required by §232.12. The elimination of the run-through and unit run-through tests, the increase from 500 to a 1,000 mile inspection and the elimination of in-date testing (IDT) were all adopted on the premise that carriers would comply fully with initial terminal tests. Standards such as the increase to a 10½ inch maximum piston travel were based upon the erroneous assumption that cars were already functioning safely within the limits of federal law. Sadly, this is not the case. The carriers are ignoring initial terminal tests and are running dangerously defective cars. These same carriers and their representatives are advocating further changes in the regulations and the elimination of safety tests and inspections, while at the same time advocating nebulous "studies" and "surveys" which hide the reality of their violations. While the AAR joined with the RLEA in calling for strengthening of the initial terminal tests, the AAR did not join with the Railway Labor Executives Association (RLEA) and the NTSB in urging an aggressive enforcement policy. Instead, the carriers have relied upon sheer size of their operations and the limited resources of the FRA to escape enforcement and penalties. 49 FR 36794 (8/23/82).

The carriers, however, have effectively succeeded in totally undermined the effectiveness of the initial terminal air brake inspection and tests by taking this work away from trained, qualified and motivated carmen and assigning it to trainmen and switchmen who are neither capable nor motivated to perform this work. Train crews themselves have repeatedly stated that they are not trained or qualified to perform the air brake tests and inspections and rely on carmen to make sure that the trains are safe and ready to run.

The carriers are also trying to divert and dilute the FRA's enforcement capabilities. The carriers are fully aware of the limited funding and enforcement capabilities of the FRA. They hope to divert the FRA from direct enforcement by inspection for specific violations to more indirect studies of theoretical causes. The carriers would rather have the FRA look at statistics on paper than inspect cars on the tracks. Their intent is obvious. The carriers want to avoid compliance with the regulations and escape the penalties for their violations.

The intentions of the carriers were made even clearer at a hearing held on March 9, 1984 before the Senate Subcommittee on Surface Transportation of the Committee on Commerce, Science, and Transportation. Mr. William H. Dempsey, President of the AAR danced around a question by Senator Exon concerning 300,000 violations reported to the FRA. In his answer, Mr. Dempsey set forth the desires of the carriers, stating:

"Senator EXON. Thank you, Mr. Chairman.

Mr. Dempsey, let me ask you what your opinion is specifically of these claims of 300,000 safety violations or alleged safety violations. How do you group those? Are those all frivolous and therefore unnecessary and unworthy of attention from the FRA?

"Mr. DEMPSEY. Well, Senator, I do not know what they area, and I would be in no position to comment with particularity but one can speculate about it. So far as we are concerned, the FRA is doing an increasingly better job. We do not share the union's view with respect to the utility of the systems analysis approach, for example. It was that sort of approach that was, rather than concentrating simply on finding individual violations here and there, that was recommended, as I recall, by the Office of Technology Assessment in its exhaustive and, we think, quite able appraisal of the whole rail safety system.

"What it does is to use the limited facilities of the FRA in the most efficient way possible, so that they go on a railroad and they say, look, what we really want is your full cooperation here. We want to completely examine your safety operations. Then what it does is give them that sort of picture.

"They make their recommendations, and they make it to the top executive level. That is terribly important, because if you get the attention of the top executives at a railroad who are committed to safety but who have limited amounts of time, if you get their attention, then something can be accomplished.

"Now, in the course of that, Senator, violations are discovered that otherwise would not be, because everything is thrown open to the FRA inspectors. Now, to the extent that any of these violations are discovered in the course of that kind of an inspection, obviously it seems to me that the prudent thing for FRA to do is, except in a case in which the railroad is obviously culpable, not to press very hard, because they have to get the cooperation of the railroads in this kind of enterprise.

"Then, in addition, I am sure that many, if not most of these violations—anyone would think—were minor violations, and what is the sense of the FRA expending their enforcement resources in those kinds of circumstances? As Mr. Riley said, they do exercise their discretion, and quite properly so. If they have got a railroad that they think is not performing as well as it should, they press harder. If they have got one that they think is making determined efforts, they exercise the discretion the other way." Hearing before Senate Subcommittee on Surface Transportation, March 9, 1984, p. 47-48.

With all of the talk we hear of self-regulation, one would think the carriers would be willing to make the effort to make self-regulation work. Congress has depended upon competent qualified carmen to inspect, remove and repair dangerous and defective cars. The carriers are attempting to eliminate these trained carmen and keep the FRA inspectors at bay. For the carriers, running defective cars has become a daily routine. Thus, defective cars go undetected and unrepaired. The carriers are audacious enough to represent this failure to repair as a positive sign that cars are running with no defects and need no repairs. This is the big lie. With the carriers' successful attempts to force the carmen-car inspectors and FRA inspectors out of the train yards, the big lie continues.

As stated above, the changes in the regulations governing inspection and testing of air brakes placed a greater reliance on proper initial terminal tests and remaining intermediate inspections, making it absolutely necessary that these inspections and tests be performed by qualified personnel. Unfortunately, this has not been the case. In characteristic bad faith the carriers have used these changes, especially the 1,000 mile inspection, to decimate the ranks of carmen and turn over the work to unqualified train crews. This reduces even further the carriers' compliance with the initial terminal tests and the remaining intermediate tests. Additionally, as unqualified personnel attempt to perform these tests and as even more tests and inspections are left undone, the required mechanical inspections are not performed. By eliminating qualified carmen the carriers have accomplished what the federal laws and regulations sought to prevent: inadequate inspection and testing by unqualified personnel, no inspections at all, cars being run with dangerous defects, and a dangerous lack of maintenance and repair required to keep all types of freight cars in safe operating condition, including those cars that transport hazardous materials.

On May 6, 1985, Mr. J. R. Snyder, National Legislative Director of the United Transportation Union, in his testimony before the Surface Transportation Subcommittee of the Senate Committee on Commerce, Science and Transportation eloquently described carrier abuses of existing Agreements and the shortcomings of carriers' present inspection and testing procedures. Testifying as the Chairman of the Safety Committee of the RLEA, Mr. Snyder supported several proposed amendments to a reauthorization bill for the FRA which would increase the effectiveness of rail safety measures already in place. Several of the amendments dealt with ways to prevent harassment of employees who reported safety violations.

Significantly, Mr. Snyder spoke in support of an amendment which would require that only qualified personnel, carmen inspectors, be allowed to perform the initial terminal air brake tests and inspections and intermediate inspections. As Mr. Snyder

der testified, the carriers have gone a long way toward eliminating carmen and running defective equipment. Turning over the testing and inspection of air brake systems and mechanical equipment to untrained and unqualified personnel assures that the inspections and tests will be performed inadequately, if at all! The carriers are fully aware of this when they eliminate the only craft so trained and qualified—the carmen. Mr. Snyder outlined how the carriers took advantage of the changes in the regulations, changes which the carriers supported, to avoid their obligations under the law. As Mr. Snyder observed:

"After promulgating the liberalized amendments to the power of brake rules in 1981, the Administrator, as well as the Associate Administrator for Safety, on numerous occasions stated that the new rules would be strictly enforced, and that FRA would use the full panoply of its legal remedies to achieve compliance. The new rules were intended to place great emphasis on the initial terminal tests and inspections by qualified employees. The Administrator stated that the maximum fine would be imposed for each violation. However, we feel we have been double-crossed both by FRA and the railroads. In the first place, the FRA has not required strict compliance with the regulations. Trains regularly leave terminals with little or no inspections, many contain defective cars, and in very few instances have the railroads been fined for their wholesale daily violations. Secondly, the railroads have used the new regulations as a basis for furloughing or reassigning qualified carmen, and requiring initial terminal tests and intermediate tests to be performed by train crews. The train crews, generally, have not been given adequate training nor have they been instructed on the full responsibilities and demands of the Federal laws, such as under the freight car safety standards of the hazardous materials requirements. Carmen are recognized as being qualified to perform the tests and inspections, and they have been given rigorous training by the carriers, before being permitted to perform tests and inspections. The effect of the FRA's shutting its eye to obvious violations and the carriers use of unqualified and untrained employees to perform all the tests and inspections that are required by Federal law, have resulted in very dangerous train operations. It is obvious from anyone knowledgeable about this issue that the quality of the initial terminal tests and inspections and the intermediate inspections have significantly deteriorated, rather than improved as contemplated by the rule changes. Where no carmen are present, there are literally no inspections for hazardous materials violations or freight car standards violations. We have found that the equipment, overall, is in poor condition. It is beginning to show up in the statistical data, by equipment defects causing more and more injuries and deaths.

"The absence of proper initial terminal inspections presents further hazards to cities and towns through which these improperly inspected trains pass.

"Therefore, we are proposing that only qualified personnel be permitted to perform the initial terminal tests and inspections, as well as the intermediate inspections, which will also make them available to perform the freight cars and hazardous materials inspections." (Emphasis supplied)

The cause of defective cars and unsafe conditions is a very real one. The carriers are not allowing qualified, competent and motivated carmen to perform the necessary inspection, testing, maintenance, repair and safety precautions. In short, the carriers are not maintaining their rolling stock in much the same way as they have ignored track and maintenance of way for so many years. The carriers then seek to justify further reductions in safety regulations by using the magic words of competition and increased costs. Their motive is simply selfish economics—greed. The carriers are breaking the law by operating trains below that irreducible minimum of safety mandated Congress. By avoiding carmen inspectors who will bad order defective cars for repair and maintenance as required by federal law, the carriers have repeatedly avoided compliance with the federal regulations. Repairing these cars costs money. Mandating qualified carmen to inspect and repair these cars is a necessary expense in the operation of a safe railroad. The flagrant violations of federal regulations show that the carriers have been putting profit before safety and have been making money at the expense of the safety of the general public as well as their own personnel.

ONLY CARMEN ARE QUALIFIED TO PERFORM INSPECTIONS AND TESTS

It is abundantly clear that the carmen's craft is the only craft that has been trained to perform the initial terminal road train air brake test and inspections as well as the other tests and inspections required by federal regulations under the Power or Train Brake Safety Appliance Act of 1958. Carmen have always performed the inspection and testing of air brakes and all other equipment on freight cars.

They are the only craft so uniquely trained and qualified. This was true long before 1958 and has remained true ever since. No other craft is trained and experienced in all aspects of freight car construction, maintenance, repair, inspection, testing, and rebuilding. The other crafts are simply not qualified to test, inspect and repair the air brake systems and the other mechanical equipment on freight cars.

The United Transportation Union represents numerous crafts in the operating department, including trainmen, switchmen, yard crews and other personnel. As far back as 1975 the International President of the UTU, Al H. Chesser sought to make it clear in a letter dated August 11, 1975 to Emergency Board No. 187 that air brake inspections and tests are properly the work of the carmen craft, stating:

"This is to advise that it is the position of the United Transportation Union, representing, among other railway employees, those operating employees consisting of Firemen, Engineers, Road Brakemen, Road Conductors, Yardmen and Yardmasters, that the inspecting and testing of air brakes and appurtenances on trains and cuts of cars, and the related coupling the coupling of air, signal and steam hose are properly work of the Carmen craft, those employees before this Board represented by the Brotherhood of Railway Carmen of the United States and Canada."

This was true in 1975 and it remains true today. The carmen's craft is the only craft thoroughly trained and qualified to perform the necessary air brake inspections and tests and mechanical inspections. In a letter dated September 16, 1983, Mr. J. R. Snyder, the National Legislative Director for the United Transportation Union, reported to Mr. J. W. Walsh, the Associate Administrator for the FRA, that Conrail was in violation of the Power or Train Brake Safety Appliance Act of 1958 at the Bay View yard in Baltimore, Maryland. Mr. Snyder noted that car inspectors were employed at the terminal but that the carrier required the UTU (trainmen) to perform the inspections. Mr. Snyder observed:

"While car inspectors are employed at this terminal on a 24 hour basis, the trainmen are required by the carrier to initiate the inspections and the membership of the UTU are not experienced nor qualified to adjust piston travel, brake rigging, and/or make repairs including changing of brake shoes."

This complaint was initiated by the United Transportation Union, the union which represents the trainmen and other operating crafts. In a related letter to the Chairman of the UTU Maryland State Legislative Board, Mr. H. K. Ritter, it is reported that the Conrail Management in the Baltimore terminal at the Bay View yard was requiring train crews to perform the initial terminal air brake tests on numerous road trains daily. Again, the ability of the trainmen to perform the initial terminal air brake test is questioned by a member of the UTU:

"While it may be true a trainman can perform parts of the inspection, it would almost be impossible for a trainman to perform a complete Initial Terminal Train Air Brake Test as he does not have the experience, nor does he carry the necessary tools to repair brake rigging, replace brake shoes, reduce leakage, measure piston travel or to ensure all parts of brake rigging and equipment are properly secured."

From these reports, it is clear that the UTU does not consider itself qualified to perform the required air brake tests and inspections. Nonetheless, the carriers have not allowed the qualified carmen inspectors to perform such inspections and tests, but rather have turned over this work to unqualified crafts.

The UTU also shares the concern of the BRC of US & C that initial terminal tests and inspections are not being properly performed particularly at points where the carmen inspections have been furloughed. The National Legislative Director of the UTU sought information from all of the State Legislative Directors regarding the performance of initial terminal tests and inspections as part of an effort to repeal the changes in 1982 which increased the mileage for intermediate inspections from 500 to 1,000. Mr. Snyder observed that untrained operating crews were being required to perform all inspection and testing of air brakes and other mechanical equipment on freight cars, stating:

"* * * In addition, the operating crews, without being properly trained, have been required by the carriers to perform the tests and inspections at the initial terminals under the power brake regulations, as well as the hazardous materials laws, and under the freight car safety standards. As all of us know, the operating crews have little knowledge of the requirements of the freight car safety standards, nor have they been trained to perform these inspections.

"I want to emphasize that we are concerned here only with the inspections being made at initial terminals, and not the power brake inspections traditionally made by operating crews at outlying points. We need to know what is or is not being done at the initial terminals, particularly at locations where car

inspectors have been furloughed and operating crews are required to perform the tests and inspections."

Carmen at the FRA workshops in Kansas City, Chicago and Newark in February and March of 1993 stated numerous times that train crews were being forced to perform air brake inspections and tests and did not know what they were looking for. The train crews are worried that they will be held responsible for FRA defects travelling in trains as a result of their "inspections". Train crews are afraid that the defects travelling in their trains will leave them with inadequate brakes or no brakes and lead to a derailment or collision. There are other serious defects that can cause a derailment if allowed to travel in trains. The train crews themselves recognize that they cannot perform the proper air brake tests and inspections. In numerous instances the train crews are not allowed to do the initial terminal test and are told to take the train out.

The train crews and engineers have agreed with the carmen that the train crews are not qualified to perform the air brake tests and inspections. At the FRA workshops in Kansas City, Chicago and Newark in February and March of 1993, train crews and their representatives stated repeatedly that train crews are not qualified to perform the air brake tests and inspections. James Brunkenhoefer, the National Legislative Director for the United Transportation Union, stated forcefully and repeatedly that the train crews did not feel qualified or trained to perform the air brake tests and inspections required by the FRA. At the Kansas City workshop, Mr. Brunkenhoefer also demonstrated dramatically the opinion of the train crew members as to their qualifications to conduct the initial terminal air brake test:

"Mr. BRUNKENHOEFER. * * *

"I would like those people at UTU who voluntarily came here in the audience to stand up. *I would like any of them who think that they are trained to carry out an initial terminal brake test as required by the Federal Railroad Administration to remain standing.*

"*The record will show none of them remain standing and there were several that stood up. What, about ten, I would say, 12, and I do not think this is a unique polling.*

"If the training is being given, but people who are supposedly receiving the training are not aware of it, I think that that is a condition that may exist within the carrier's own domain, but not in reality.

"*We have been talking to the people that are members of the UTU. They do not feel that they have the training to carry out this responsibility * * **

"*The carmen have the training.*" (Emphasis supplied) Kansas City Transcript, 27:2-19 and 28:5-6.

Not one of the train crew members considered himself qualified to perform the air brake inspections and tests required by the FRA. This was not a unique situation isolated to just one carrier. As Mr. Brunkenhoefer noted: "Those train crew members were off of the UP, the Santa Fe, the Burlington Northern, Norfolk and Southern, not one carrier." Kansas City Transcript, 29:7-9.

Train crew members stated that despite the carriers' own high opinion of their training programs, the train crews still were not qualified to perform the proper air brake inspections and tests. No amount of training could replace what the carmen had already received. The carriers' own assessment of training differed dramatically from what the train crews were reporting. As Mr. Brunkenhoefer stated:

"I hear these tenured professors tell me about how great professors they are and how good teachers they are and how wonderful their program is and they all attended Yale on railroad safety training.

"*What I am hearing the students say is, that is not happening.* Now, as you evaluate a professor for tenureship to a university, one of the things you take into account is what is happening to the student, and what the student, at least among those people that are train crews, are saying that what you are putting in your program is not fulfilling what we feel like are the Federal Railroad Administration requirements." (Emphasis supplied.) Kansas City Transcript, 58:16-59:7.

Train crew members told how the carriers pressured them into performing inspections despite their protests that they did not know what they were looking for. In numerous instances the train crews were forced to take trains that were not properly inspected and that had numerous, obvious defects. Train crews have repeatedly asked for carmen to perform the air brake tests and inspections required by the FRA.

Bill Keppen, International Vice President of the Brotherhood of Locomotive Engineers, stated that carriers' training and certification did not make the engineers qualified to perform the air brake tests and inspections required by the FRA. Mr. Keppen questioned how much train crews could retain, given their own areas of ex-

pertise and the additional technical matters that carmen are required to know and use on a daily basis. There is such a thing as overloading personnel and decreasing their effectiveness. Mr. Keppen expressed his concerns about the air brake testing being thrust upon train crews when the carriers suddenly eliminated carmen, the only craft qualified to conduct these air brake tests and inspections. As Mr. Keppen stated:

"Mr. KEPPEM. My concern is that what you have attempted to do is like hooking a sled dog to a fire wagon. A sled dog is damn good at pulling a sled up in Alaska or something like that, but he don't know nothing about pulling a fire wagon around.

"The trainman is very good at what, at this, at what he is required to do and it is important that he is out there and knows that the brakes set and release. *The issue is, is the equipment fit to operate on the line's road and he is in not qualified to make those judgments.*

"And as far as an employee, it is important. You make a valid point there that the operating employees can rely on the equipment. I would submit that the only way we could rely on equipment is that we not be obligated, we are not capable of learning everything we need to know about the train equipment, brakes, rigging and all that stuff. *We have to rely on the craft of the carmen in order to determine whether a particular car or group of cars or an entire train is fit to go on line and roll.*" (Emphasis supplied.) Kansas City Transcript, page 95:4-22.

The train crews' concerns were not limited to the initial terminal air brake test and inspection. The train crews are also justifiably concerned with the lack of proper 1,000 mile intermediate inspections. As train crews are forced to perform 1,000 mile inspections, there is the growing motivation to forego the test and continue to destination. As Mr. Brunkenhoefer observed at the Kansas City workshop:

"Mr. BRUNKENHOEFER. Yes, I am concerned and I have some points, that we are, the operating crews are being required to make the 1,000 mile test. We talked quite some length this morning about training. *Some of those 1,000 mile tests are being prescribed to be done at sidings that are at 996 miles in centralized traffic control where you are going down the main line at 70 miles an hour and the next signal is green.*

"Personal liability or no personal liability for someone is running miles, *there is at least a temptation to take the signal and I cannot help but feel like the people who are in business to run transcontinental trains, you do not have to do the 1,000 mile brake test at 1,000 miles when the train is going 1,500. You can do it at 700, you can do it at 800, 900 as well as 1,000.*

"But the feelings on our part is, is that the trains are being ran by locations where people that really are qualified to examine trains and being ran to furthest possible link in order to have operating people make the inspections and we do not really feel like we are comfortable with that and that has already been handled.

"It is, of course, obviously on the issue of the 500 mile that we favor the carmen's position, but if we are not going to do that, *let's at least say that when this inspection is made, you get an inspection. You get an inspection from someone who is certain about what they are doing rather than our group of people who feel very uncomfortable in carrying out this obligation.*

"Mr. FRIEDMAN. I think so the record is clear, *when he said get an inspection, he means by carmen inspectors.*

"Mr. BRUNKENHOEFER. *That is correct.*

"Mr. COTHEN. The record is clear on that. We were all clear on that, I think." (Emphasis supplied.) Kansas City Transcript, page 271:11 to 272:21

Mr. Brunkenhoefer repeated in Chicago:

"We don't have the training. We've testified to it. We've stood up, we've said it. It's like the country and western song, what part of no don't you understand? You know, yes, *I want the Carmen to do the work.*" Chicago Transcript, 3/2/93, page 102:5-7.

Mr. Keppen also stated that the lack of defects being found in rail cars was due in part to the inadequate inspections being performed by train crews who were not qualified to perform the intermediate inspection. The FRA itself had found numerous defects in cars that were only inspected by train crews and not by qualified carmen. As Mr. Keppen noted:

"Mr. KEPPEM. Bill Keppen with the BOLE [sic] once again. My concerns follow along the lines of Mr. Brunkenhoefer. We had a situation, not on the railroad where I hold my seniority, but on another railroad operating from the Twin Cities Minneapolis/St. Paul area, which happened with coal equipment that was owned by a power company and it was being inspected by trainmen, not will-

ingly, but at a location remote from the yard and it was not getting the 1,000 miles inspection by qualified people.

"There was a dispute between the individual employee's representative and the carrier as to whether he was, you know, he was disqualifying cars because he had a sense, even though he did not have clear qualifications, that *some of this, you know, especially when the brakes did not set at all, that this equipment was not up to standards and he would be subject to discipline if he did not set it off, but he was also being threatened with discipline if he did set it off.*

"It finally got to the point where they had called FRA inspections in and confirmed the fact that literally dozens of cars out of this equipment were being run up and down the road because of the threat that they should not be set out." (Emphasis supplied.) Kansas City Transcript, page 272:22 to 273:22.

How safe can the railroads be when the carriers require untrained and unqualified personnel to inspect all types and varieties of freight cars? The carmen's craft is the only skilled craft that repairs, maintains and rebuilds entire freight cars. Carmen are thoroughly trained in all of these aspects as well as the complete testing and inspection of the air brake system and all other equipment including safety appliances required by federal law. It makes sense for the carmen who are trained to maintain, repair and inspect freight cars to be the craft mandated to perform the air brake tests and inspections required by the FRA. This is obvious to the carmen and the train crews, yet the carriers have continued to ignore the obvious. Congress must take the obvious step and mandate that carmen are the only craft qualified to perform the air brake tests and inspections and mechanical inspections required by federal law and regulations.

CONCLUSION

In conclusion, I would like to state that the BRC is interested in the growth of the railroad industry and greater safety to the railroad workers and the general public. As set forth above, BRC is interested in measures which will not only address new concerns in the railroad industry but also focus on recurrent problems. For this reason, BRC seeks new laws and regulations which govern the shipment of radioactive materials and also seeks to assure compliance with existing laws and regulations governing air brake tests and inspections and mechanical inspections. Congress must address the multitude of issues surrounding shipment of radioactive materials. The unprecedented increase in the shipment of radioactive materials by rail requires a comprehensive approach to prevent the release of these substances during shipment. Further, Congress should mandate that carmen be the only craft to perform the air brake inspections and tests required by federal law and regulations. This is the obvious answer to the numerous defects that continue to run in trains when train crews and other unqualified personnel are forced to perform the air brake tests and inspections. There should be no exceptions. The revisions to the changes in the Hours of Service Act as suggested by the BRC should be adopted to assure participation by all railroad personnel.

PREPARED STATEMENT OF UNION SWITCH & SIGNAL INC.

POSITIVE TRAIN SEPARATION TECHNOLOGY ISSUES

Enhanced safety continues to emerge as a major railroad industry issue with a focus being placed on Positive Train Separation (PTS) technology. A recent joint initiative by the Burlington Northern and Union Pacific railroads will seek to demonstrate the costs and benefits of overlaying a conceptual positive train separation system onto existing railroad control systems. Union Switch & Signal Inc. strongly supports the BN/UP initiative and believes it is a catalyst that can lead to increased railroad safety.

A major barrier to the implementation of advanced railroad safety systems has been and remains their high cost. The major U.S. railroads, while for the most part financially healthy, cannot justify the huge investment to implement current positive train separation technology. The railroads, understanding this, have been searching for technologies that can provide not only accurate train positioning, but (attendant) benefits which provide real returns on their investment.

The BN/UP concept will seek to provide levels of train separation safety approaching those originally envisioned by the Advanced Train Control System concept. It is equally important, however, to find and demonstrate functions in addition to train separation that may provide returns on investment (ROI). Clearly, without a positive ROI, the federal government may be constrained to fund completely or subsidize in part the implementation of positive train separation systems.



Limited research has been undertaken by the Association of American Railroads, investigating the possibility of using Global Positioning Systems or track transponders as PTS enabling foundation technologies. Both of these technologies provide estimates of train position. However, they have significant limitations. GPS has coverage and accuracy limitations (in the presence of inclement weather, hills, buildings, etc.), even with augmented differential GPS systems; while transponders have high installation and maintenance cost ramifications along with accuracy problems. In addition, the railroads have not yet found significant features other than train positioning, with either technology, that can provide cost/benefit returns.

Union Switch & Signal Inc. is developing a new positive train separation technology that can provide on-board positioning without the limitations presented by either GPS or transponders, and with tremendous ROI potentials. Inertial navigation systems have been used to safely and accurately guide airliners and space craft for nearly 30 years. Union Switch & Signal is developing a system called Train Inertial Positive Separation, applying proven inertial navigation technology to the railroad environment. The company has recently presented its concepts and vision to major freight railroads and Amtrak, and has received favorable feedback.

The inertial navigation positioning system, because it acts autonomously and is located on-board the locomotive, has the potential to provide a host of significant ROI features. These include on board monitoring and optimization of fuel use, smart braking, and track maintenance diagnostics. These benefits, unique to a railroad inertial navigation system, support a strong return on investment that, notwithstanding, has a central mission of enhanced safety. In addition, by virtue of inertial navigation's accuracy (1 meter), the identification of individual trains on parallel tracks will be possible. Accurate positioning, tied in with large centralized control offices, will significantly increase the applicability of positive train separation systems on the nation's railroads and will allow them to move towards the implementation of full scheduling. It has been estimated that the ability to fully schedule train services would result in tens of millions of dollars in operating savings for the railroads.

The recently announced Burlington Northern/Union Pacific positive train separation demonstration plans to overlay the PTS system on existing controlled territory. It intends to provide the following enhanced safety functions: speed limit enforcement, authority limit enforcement, and digital delivery of authorities, limits and alerts. The position measurement system that will be used is GPS operating with on board tachometers. The test, as currently envisioned, does not have provisions for comparing PTS technologies.

To meet the industry challenge of seeking technologies that enhance safety with positive train separation and have demonstrable cost/benefit returns on investment, the BN/UP Proof of Concept Demonstration would be more definitive if it included, analyzed and compared alternate technologies as part of the test.

The Advanced Technology Group at Union Switch & Signal Inc. is prepared at any time to provide information and its analyses related to the competing positive train separation technologies to the Committee. US&S would like to strongly urge the Committee to support and encourage a multiple technology positive train separation demonstration versus the currently envisioned single technology test.

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